

THE PROVINCE OF
SASKATCHEWAN
CANADA

Its development and
opportunities



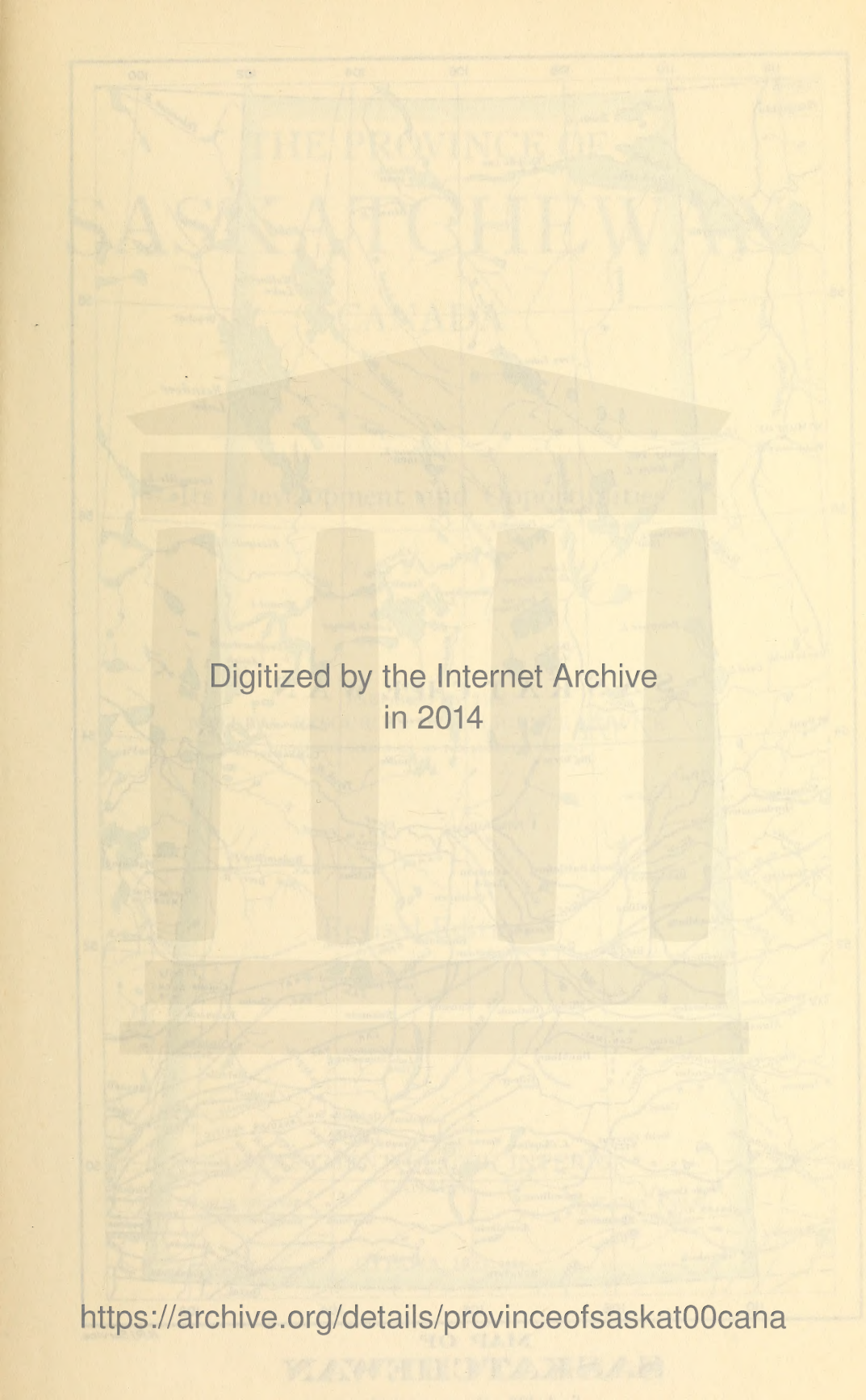
Department of the Interior
Canada

Hon. Charles Stewart
Minister

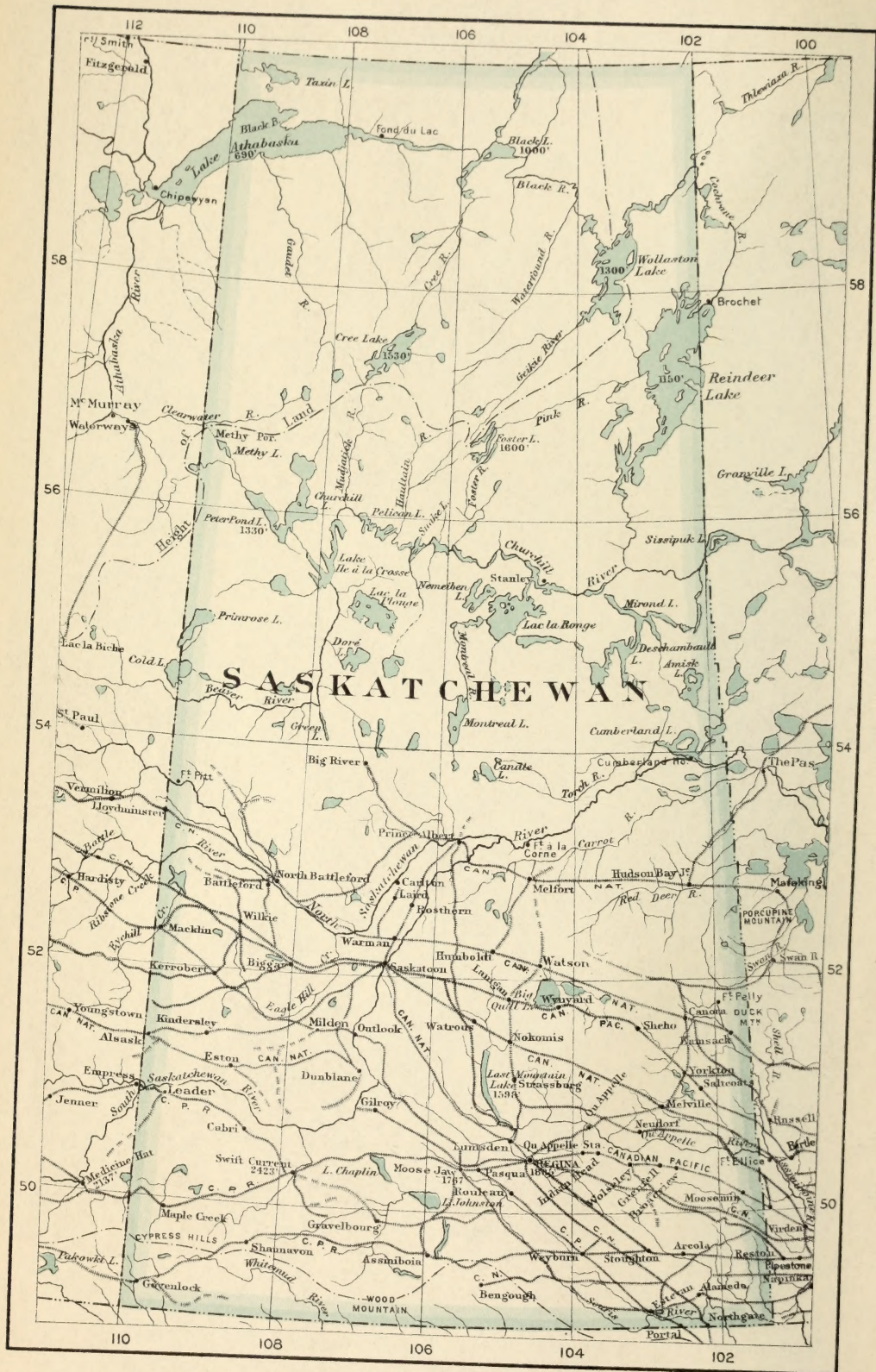
W. W. Cory, C.M.G.
Deputy Minister

Issued by the
Natural Resources Intelligence Service
F. C. C. Lynch, Superintendent
OTTAWA





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MAP OF SASKATCHEWAN

Scale 100 miles to one inch

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THE PROVINCE OF SASKATCHEWAN CANADA

Its Development and Opportunities

[F. H. KITTO]

PREPARED BY THE
NATURAL RESOURCES INTELLIGENCE SERVICE
UNDER THE DIRECTION OF THE SUPERINTENDENT

Revised Edition

DEPARTMENT OF THE INTERIOR
CANADA

HON. CHARLES STEWART
Minister

W. W. CORY, C.M.G.
Deputy-Minister

OTTAWA, 1923

The previous edition of this publication, written by F. H. Kitto, F.R.G.S., has been revised to date. A few statistics of minor importance have been omitted in this revision and all the latest obtainable data have been embodied.

The section on Forests was supplied by the Forestry Branch, and that on Water Powers by the Dominion Water Power Branch of the Department of the Interior. The section on Minerals was prepared from data especially provided by the Mines Branch of the Department of Mines. The courtesy of these Branches is hereby acknowledged.

This publication is one of a series issued by the Natural Resources Intelligence Service, Department of the Interior, Ottawa, for the benefit of the public, and copies, together with maps, etc., may be obtained on application to the Superintendent of the Natural Resources Intelligence Service, Department of the Interior, Ottawa.

CONTENTS

Historical Sketch:	
Area and Population.....	5-7
Physical Features.....	8
Survey System.....	15
Government:	
Representation; Judicial System; Citizenship; Naturalization; Franchise; Militia and Police; Revenue; Government Agencies; Land Districts.....	21
Transportation and Communication:	
Roads and Trails; Railways; Electric Street Railways; Waterways; Telephones; Telegraphs; Postal Service.....	30
Education:	
University; Primary and Secondary Schools.....	40
Religion.....	44
Climate:	
Temperature; Statistics.....	46
Soil:	
Prairie; Alkali; Soil Surveys.....	50
Agriculture:	
Lands and Products; Statistics; Live Stock; Homesteads; Government Aid; Co-operation; Dairying; Successes and Opportunities.....	54
Cities and Towns:	
Urban and Rural Population; Regina; Saskatoon; Moose Jaw; Prince Albert; Swift Current; North Battleford; Weyburn.....	68
Urban Opportunities.....	70
Forests:	
General Description; Species and Occurrence; Lumbering Industries; Forestry; Tree Planting.....	78
Water Powers:	
Statistics.....	89
Minerals:	
Production; Economic Geology; Coal; Clay; Other Minerals.....	91
Furs, Fish and Game:	
Statistics.....	101
Synopsis of Dominion Land Regulations.....	108
" " Mining Regulations.....	108
" " Timber Regulations.....	10
" " Grazing Regulations.....	109
" " Game Laws.....	109
Prairie and Forest Fires.....	110
Bibliography.....	113

MAPS

The Province of Saskatchewan.....	Frontispiece
Physiographic Map.....	9
Drainage Map.....	13
Telephone Map.....	36
Forest Map.....	79
Water Powers Map.....	88

CHARTS

Survey System.....	16
Crop Acreage.....	56
Cereal Production.....	56

ILLUSTRATIONS

Legislative Buildings, Regina.....	19
Canadian Government Elevator.....	30
University Buildings, Saskatoon.....	40
Public School, Saskatoon.....	42
Connaught School, North Battleford.....	43
Sheep Grazing, Saskatchewan.....	47
Prelude Wheat at Indian Head.....	55
Harvesting at Wilkie, Sask.....	57
Cutting Sun-flowers for fodder.....	61
University Bridge, Saskatoon.....	73
Standing Timber Porcupine Forest Reserve.....	85
Saskatchewan Clay Deposits.....	97

THE PROVINCE OF SASKATCHEWAN

HISTORICAL SKETCH

THE prairies of Western Canada need no introduction. The fame of their magnitude and their beauty is well known, while the romance of the transition from the buffalo hunting grounds of the red man to the wheat fields of the white is already history. Like the ocean they stretch away in every direction from the eye till their gently undulating waves of verdure vanish in the distant horizon. Day after day the early explorers pushed their way across these unbroken solitudes, and night after night pitched their camps under the starry heavens, with the same vista always about them. Seeing the multitudes of gorgeous flowers and the luxuriant vegetation carpeting their route, they must have realized that a great heritage awaited the settler. Even the transcontinental traveller of to-day marvels at the outlook. All day long his train rushes on its way, and from the first break of dawn till twilight the eye fails to see any discord in the symmetry of the prairie gardens.

From these mighty plains have been formed three great provinces, the "prairie provinces" of Canada, of which Saskatchewan occupies the middle location. Their northerly limits extend beyond the plains, however, into the more rugged and complex districts of the Laurentian region, thus giving a field of more varied resources to draw upon.

The province of Saskatchewan embraces the heart of the prairies, and the lion's share of their choicest lands. To the east lies Manitoba and to the west Alberta. Here in the midst of the great grain belt the province has developed within a few short years into the greatest wheat-producing region of the Dominion.

The southerly boundary of the province is the International boundary line between Canada and the United States, being the 49th parallel of north latitude. The states of North Dakota and Montana are immediately adjacent to this line. The northerly boundary is the 60th parallel of north latitude, beyond which lie the Northwest Territories. In length, then, it extends over 11 degrees of latitude and measures 761 miles. Its width gradually decreases from 393 miles, at the International boundary, to 277 miles at the northerly end, extending from an irregular line between longitude 101° 30' and 102° west to longitude 110° west. The average width is 335 miles.

Saskatchewan is essentially an agricultural province and excels in the production of wheat. The remarkable fertility of its soil, the ease with which its prairies are brought under cultivation, and the wonderful success of its crops have resulted in its rapid development. To maintain its supremacy, however, it will become necessary to practise more scientific

methods of farming than were required during the first few years, and already mixed farming is receiving more attention. Following the rural activities, urban centres have sprung up with amazing rapidity. Since the creation of the province in 1905 the provincial government has taken most progressive steps, and enacted far-seeing legislation to ensure the prosperity of the community and to guarantee the welfare of its people.

The history of Saskatchewan is brief and uneventful compared with that of the older provinces of Canada. The provinces of Saskatchewan and Alberta are the youngest of the Confederation, and as such have a history dating back barely twenty years. The growth to provincial status might be said to date from about the year 1870, when the lands now comprising the three prairie provinces and the territories were acquired by the Dominion of Canada. Prior to this date the history of Western Canada is the history of its fur trade, covering a period of some 200 years. The name "Saskatchewan" is a corruption of a Cree Indian expression signifying "swift current," or "rapid river." It was originally applied by the natives to any river having such peculiarities, but soon became restricted by the whites to the one great river of the fertile belt. The name was later given to one of the territorial divisions and finally adopted by the province.

From 1670 to 1870 the Hudson's Bay Company constituted the chief power throughout this area. Prince Rupert's lands included the whole of the Great Plains, and in these lands the Hudson's Bay Company claimed absolute authority under the terms of their royal charter.

In 1811 the Hudson's Bay Company granted to the Earl of Selkirk 74 million acres of land on which to establish a colony. A settlement was made with the Indians for their claims and the famous Red River Colony, the pioneer agricultural settlement of Western Canada, was forthwith launched on its stormy career. The government of this colony was entirely in the hands of the Hudson's Bay Company. This arrangement sufficed in the early days but as the colony grew, in the course of some 50 years a more democratic form of government became imperative.

In 1867 the Dominion of Canada came into existence under the British North America Act. One of the first acts of the Government was to take steps to acquire the unorganized British possessions of Western Canada and to introduce a form of government commensurate with the requirements and well-being of its settlers. The claims of the Hudson's Bay Company were accordingly adjusted and for a small consideration these British possessions became the asset of the new Dominion. Some opposition to the new arrangement was manifested in the Riel rebellion of 1869, but proved only temporary. In 1870 the re-arrangement took effect. The province of Manitoba was created and the remainder of the lands made into the Northwest Territories. The Lieutenant-Governor of Manitoba was made, ex-officio, Lieutenant-Governor of the Northwest Territories, assisted by the Executive Council.

The political history of Saskatchewan, therefore, dates only from 1870 with this nucleus of government. In 1875 the territory was conceded a Lieutenant-Governor of its own, and in 1882 the provisional districts of Assiniboia, Saskatchewan, Alberta, and Athabaska were made. In 1885 there occurred the Saskatchewan rebellion, otherwise known as the Northwest Rebellion of 1885, or the second Riel rebellion. The encroachment of

white settlers upon the lands claimed by the Indians and half-breeds, and, perhaps even more than this, the manner in which the latter were being hemmed in and restricted, led to this armed resistance. Its speedy suppression and the prompt adjustment of just complaints mark the last forceful display of the red man's objection to the advance of civilization.

A rebellion naturally attracts considerable attention to the district affected. In this case it resulted in a large influx of settlers, who came to avail themselves of the opportunities this fertile district offered. It also resulted in bringing to the scanty population of pioneer settlers a voice in the management of their own affairs, representation at Ottawa being granted in 1886. This was followed two years later by the creation of a local legislature, whose powers were enlarged in 1890 to include the control of all territorial expenditure. In 1897 the Executive Council was made responsible to the Legislature, thus giving to the four provisional districts of Assiniboia, Saskatchewan, Alberta and Athabaska a responsible government with considerable latitude. In 1905 the Dominion government created out of these four districts the two provinces of Saskatchewan and Alberta, which took their places with the seven older provinces of the Confederation on the 1st September. The province of Saskatchewan practically included the old districts of Assiniboia, Saskatchewan and the east half of Athabaska, the province of Alberta taking the district of Alberta and the west half of Athabaska. The first provincial government consisted of a Lieutenant-Governor and a Legislative Assembly of twenty-five members. The representation in the House of Commons consisted of six members and in the Senate of four.

According to the terms of the British North America Act, Quebec was to be made the basis of representation with 65 members in the House of Commons, the other provinces being represented according to their population. A Dominion census was arranged to be taken every ten years, following which the necessary re-adjustment in representation could be made, the unit being derived from one-sixty-fifth of the population of Quebec. The rapid growth of the population of Saskatchewan resulted in an increased representation at Ottawa, which now consists of 16 members in the House of Commons and 6 members in the Senate. The census of 1921 further increased the representation to 21 members, which will become effective after the next election. The Provincial Legislature has also increased in numbers as newly opened districts have been given representation. It now consists of 63 members.

The Honourable H. W. Newlands, K.C., is now the Lieutenant-Governor, and the Honourable Charles A. Dunning the Premier.

Regina, the capital of the territories, falling conveniently within the boundaries of the newly created province of Saskatchewan, was chosen as its capital, thus linking the history of the old with the new. The natural resources of the province are under the control of the Federal Government.

Area and Population

The area of Saskatchewan is 251,700 square miles. Of this 8,892 square miles are covered by water, leaving 242,808 square miles of land. The province exceeds in extent that of any European country except Russia. It is more than double the combined area of England, Wales, Scotland, and Ireland, also more than double the area of Italy, and more than twenty times that of Belgium.

Of the total land area of Saskatchewan, some 70 million acres are believed to be suitable for agricultural purposes. Of this only about 20 million acres have been improved. Most of the land area unsuitable for agriculture is capable of producing forests of economic value, while the water areas are invaluable for their fisheries resources.

The population, according to the Dominion census of 1921, was 757,510, an increase in ten years of 265,078. The growth of the population during the past fifteen years has been very rapid, as shown in the following table.

GROWTH OF POPULATION

Year	Population	Five-year increase
1901.....	91,279	
1906.....	257,763	182.4 per cent
1911.....	492,432	91.0 " "
1916.....	647,835	31.6 " "
1921.....	757,510	16.93 " "

The total urban population in 1921 was 218,958, or 28.9 per cent, as compared with the rural population of 538,552, or 71.1 per cent. The rapid increase of population was principally due to heavy immigration during the years preceding the war. Some details of this are shown on the following table.

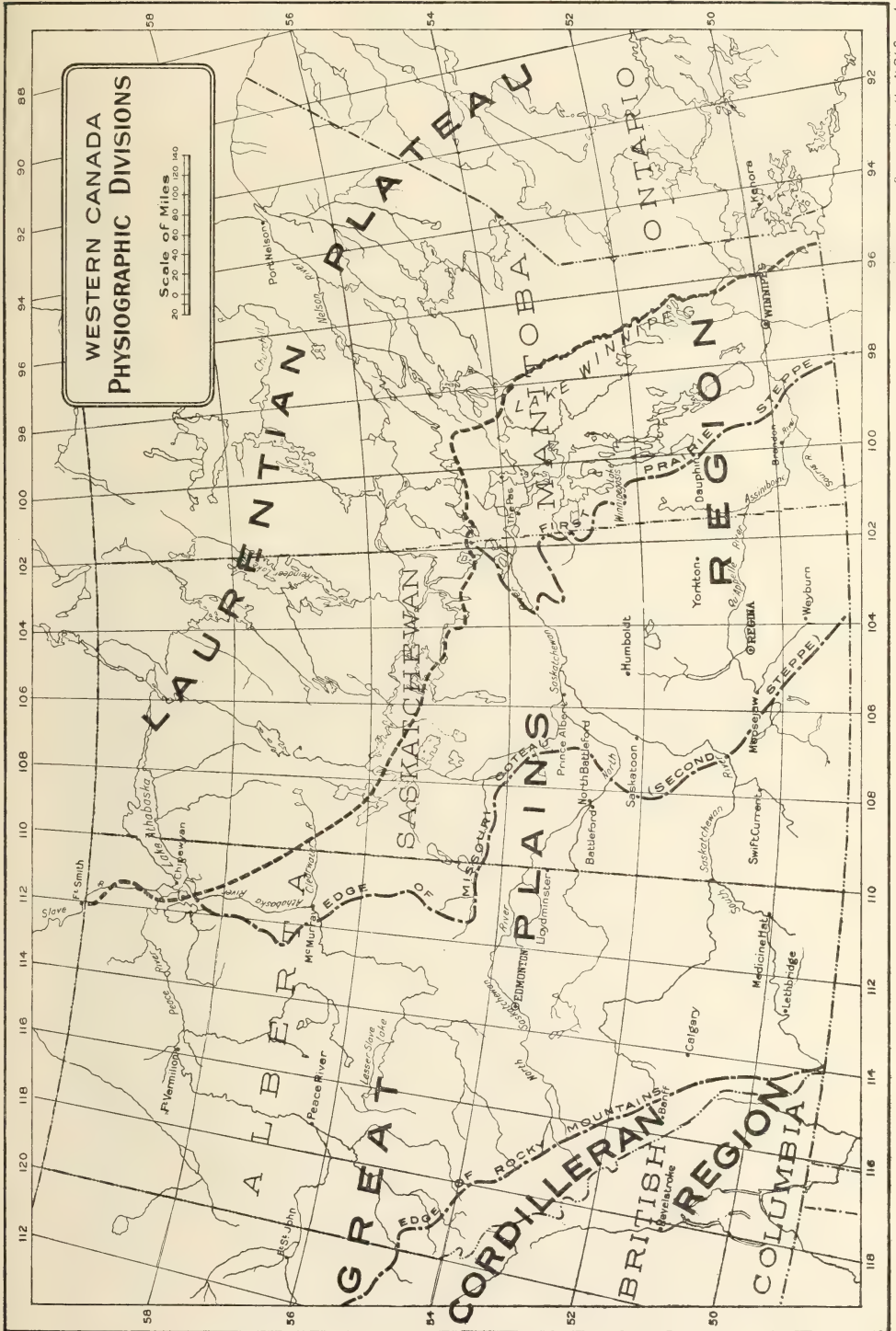
IMMIGRANT ARRIVALS IN CANADA AND SASKATCHEWAN SINCE 1906

Dominion fiscal year	Immigrant arrivals from			Total	Immigrants to Saskatchewan	Per cent of total
	United Kingdom	United States	Other Countries			
1906.....	86,796	57,796	44,472	189,064	28,728	15.1
1907*.....	55,791	34,659	34,217	124,667	15,307	12.2
1908.....	120,182	58,312	83,975	262,469	30,590	11.6
1909.....	52,901	59,832	34,175	146,908	22,146	15.0
1910.....	59,790	103,798	45,206	208,794	29,218	13.1
1911.....	123,013	121,451	66,620	311,084	40,763	13.1
1912.....	138,121	133,710	82,406	354,237	46,158	13.0
1913.....	150,542	139,009	112,881	402,432	45,147	11.2
1914.....	142,622	107,530	34,726	384,878	40,999	10.6
1915.....	43,276	59,779	41,734	144,789	16,173	11.1
1916.....	8,664	36,937	2,936	48,537	6,001	12.3
1917.....	8,282	61,389	5,703	75,374	9,874	13.1
1918.....	3,178	71,314	4,582	79,074	12,382	15.6
1919.....	9,914	40,715	7,073	57,702	8,552	14.8
1920.....	59,603	49,656	8,077	117,336	14,287	12.1
1921.....	74,262	48,059	26,156	148,477	13,392	9.0
1922.....	39,020	29,345	21,634	89,999		

*For nine months only.

Physical Features

The geographical features of Canada may be divided into five sections, in two of which the province of Saskatchewan lies. These divisions are: (1) The Appalachian region, occupying the Maritime Provinces and eastern Quebec, and underlain by folded sediments and igneous rocks. (2) The St. Lawrence lowlands of southern Quebec and southern Ontario, underlain by nearly horizontal sediments. (3) The Plain region of Manitoba,



Saskatchewan and Alberta, underlain by flat-lying sediments. (4) The Laurentian plateau, consisting of vast upland surrounding Hudson bay, and underlain chiefly by igneous rocks, such as granite, together with a lesser amount of hardened sediments. (5) The Cordilleran region, the mountainous region extending from the Rocky mountains to the Pacific coast, and underlain by folded sediments and igneous rocks.

The southern portion of Saskatchewan occupies a part of the third division or Plain region, while the northern portion falls within the fourth division or Laurentian plateau. Without considering these regions in their entirety it is impossible to get a proper conception of the geographical features of the province, which in itself comprises no independent feature of peculiar prominence. The plain region has been described in most instructive language by Dr. Bruce Rose, of the Geological Survey of Canada, while Mr. Wyatt Malcolm, of the Department of Mines, Ottawa, has given a description of the Laurentian plateau. The following account of the Plains topography was prepared by these authorities.

The topography of the Great Plains is essentially that of a base-levelled surface. It is a plain developed on nearly flat-lying, soft strata—clays, shales, and friable sandstone—and over great areas the slope of the Plain corresponds to the dip of the underlying strata; but, considered as a whole, the surface is seen to bevel the strata at small angles. It owes its flatness partly to the horizontality of the strata, but primarily to base-levelling by normal erosion. The origin of the Plains is, then, in part structural and in part erosional. They were formed in pre-glacial times and the surface has been modified by glacial scour and deposition. It is, in general, a region of rolling prairie, interrupted by ridges and valleys.

The evenness of the surface is in places made more complete by the filling of the hollows with superficial deposits and in places broken by the piling up of superficial deposits in ridges. The superficial deposits are almost wholly of glacial origin and were deposited during the retreat of the continental glaciers. The fillings are outward and lake deposits, as is shown by their sorted and stratified condition, and the ridges are morainal deposits. A veneer of boulder clay mantles the surface almost everywhere.

The underlying rock formations of the Great Plains are for the most part of Cretaceous age, but here and there plateaus of Tertiary rock stand above the general level. These are remnants of much more widely distributed Tertiary deposits, the greater part of which has been denuded away during the base levelling process. The rise from the plains to the plateaus are commonly marked by clay bluffs, particularly on the south and west sides. The north and east slopes are, as a rule, covered with a mantle of boulder clay. The plateau surfaces are, like the plains surfaces, rolling prairies, and the question arises as to whether they owe their flatness to the original, horizontal position of the strata, or represent the remnants of a previous base-levelled surface like that of the Great Plains.

The valleys cut below the level of the plains detract very little from the apparent evenness of the general plains surface. They are noticeable only when the observer is in their immediate vicinity and are lost to view from the broad interstream areas. The valleys are of two types. Streams, such as the Saskatchewan, with headwaters in the Rocky mountains and with a perennial flow, have cut canyon-like valleys in the soft strata, while

streams with headwaters on the plains and an intermittent flow usually have shallow valleys. Streams of the latter type have their sources in an intricate system of ramifying and inosculating coulees, especially when they head in the rocks of the Tertiary plateaus mentioned above.

A second and earlier system of stream courses, in part coinciding with the present system, is marked by valleys which are now abandoned or in which the present streams are so small as to be wholly inadequate to account for their excavation. These valleys were excavated at a time when the climate was much more humid and the precipitation consequently much greater than at present, probably during the retreat of the continental glaciers. The abandoned valleys are commonly occupied at intervals along their courses by shallow saline lakes, or for short distances by intermittent streams.

Over considerable areas, the evaporation is equal to the precipitation and there is an almost absolute lack of running water. In some areas the surface water is concentrated in lakes with no outlets, giving, locally, an interior basin drainage.

THE STEPPES

The southern part of the Great Plains in Canada is divided into three steppes by two eastward facing escarpments. The first steppe, or lowest prairie level, is that of the Red River valley, the Winnipeg system of lakes and the flat land surrounding them. This plain is developed on Palaeozoic rocks, and in that respect differs from the more typical Great Plains to the west, which are developed on the soft Cretaceous rocks. It was occupied on the retreat of the continental glacier by a great lake—glacial Lake Agassiz—and the surface is deeply mantled with boulder clay and with alluvium deposited in the lake. It has an average elevation of about 800 feet above the sea and drains to Hudson bay by way of the Nelson river.

The passage from the first to the second steppe is over a rise or eastward facing escarpment of Cretaceous rocks, known as the Manitoba escarpment. The drainage channels from the second to the first steppe are wide and divide the escarpment into several prominent groups of hills known as the Pembina, Riding, Duck, Porcupine, and Pasquia hills. The summits of these hills rise from 500 to 1,000 feet, in places more, above the level of the first steppe.

West of the Manitoba escarpment the Cretaceous Plains stretch away to the foothills of the Rocky mountains. The elevation above the sea increases gradually from less than 1,500 feet to more than 4,000 feet. This is the area occupied by the second and third steppes. The second steppe lies between the Manitoba escarpment and the Missouri coteau, an eastward facing escarpment of Tertiary rocks. This escarpment is the eastern boundary of the Wood Mountain plateau, one of the Tertiary remnants mentioned above. The eastern boundary and a northwesterly trending arm from it form a steplike rise of from 200 to 500 feet; but since there is an equal drop on the western side of the Tertiary remnant the Missouri coteau does not mark a rise from one prairie level to another as the Manitoba escarpment does. It forms, however, a convenient dividing line on the plains. East of it, the boulder clay deposit is thicker than to the west, and the front of the escarpment is almost everywhere

deeply covered with the boulder clay. It seems probable that the coteau acted as a barrier to ice advancement at certain stages of the glacial period, and that the great thickness of glacial accumulations along the front of it and to the east are to be accounted for in this way.

The third steppe reaches from the Missouri coteau to the foothills. It is in general like the second steppe but the superficial deposits covering it are thinner; and, while there is only Tertiary plateau on the second steppe (Turtle mountain, along the boundary between Manitoba and North Dakota), there are a number of such residuals on the third steppe. Chief among these are the Wood Mountain plateau and the Cypress Hills plateau.

This threefold division of the Great Plains is chiefly useful for descriptive purposes. The actual decrease of elevation in passing from one steppe to the next lower is small in comparison to the decrease due to the general eastward slope of the plains. Despite minor irregularities—plateaus, valleys, and escarpments—they preserve their character as plains throughout, and stand as one of the best samples known of an uplifted and base-levelled surface. The region is often described as a “rolling prairie,” a general term that is aptly applied to the whole extent of the plains.

THE LAURENTIAN PLATEAU

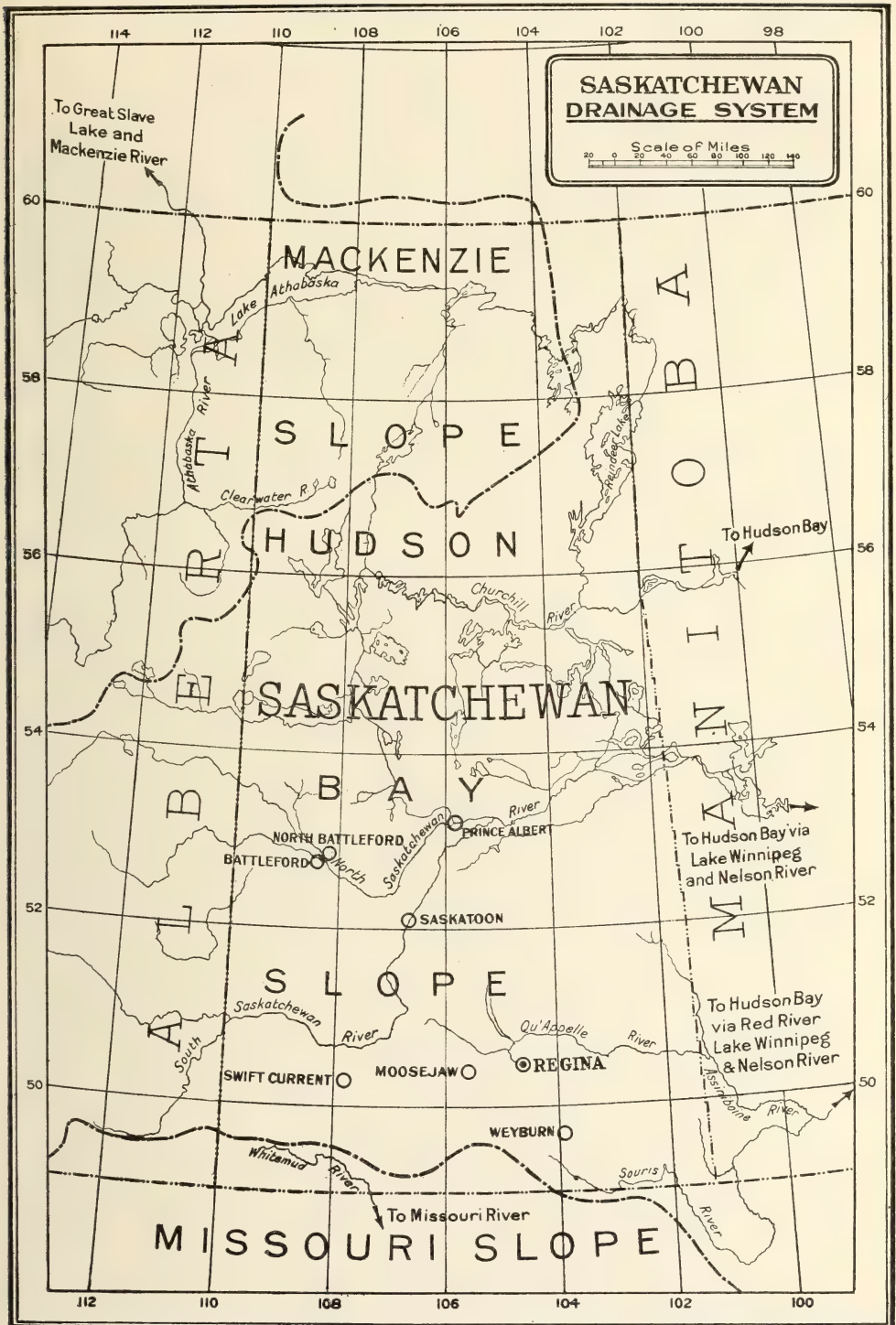
The most extensive physiographic unit of Canada is the subdued Laurentian plateau. This is a gently sloping plateau of rather even surface, comparatively low, and seldom rising 2,000 feet above the sea. The hills breaking the even surface rise but a few hundred feet at most above the general level.

It is a great U-shaped area surrounding Hudson bay, and extends from the Atlantic ocean, on the Labrador coast, west to a line running northwest through Lake Winnipeg, Lake Athabaska, Great Slave lake and Great Bear lake. It extends south to Lake Huron and Lake Superior, and occupies nearly all of the provinces of Ontario and Quebec, except the area southwest of a line running from Kingston to Georgian Bay, and that part of eastern Ontario forming the angle between the Ottawa and St. Lawrence rivers, and that part of Quebec south of St. Lawrence river.

This plateau is underlain by hardened sediments and igneous rocks. The latter are much more widespread than the former, and granitic types predominate. The rocks of this region are among the oldest rocks of which geologists have any knowledge. They are very resistant, and, although they have been exposed to weathering since very early in the earth's history, the inequalities in the surface features have not been wholly reduced. These inequalities have been augmented by glacial action. A further effect of glaciation was the denuding of much of this region of its soil. Generally speaking, therefore, the physiographic and soil conditions are not favourable to agriculture. Over a great part of the area, however, sufficient soil has been retained to support a forest growth, and it is to be regretted that large stretches of such land have been depleted of their forests and have become dreary, barren wastes.

Drainage

The province has a main easterly slope, draining almost entirely into Hudson bay eventually, though by widely separated courses. A considerable area in the northwest corner falls within the Arctic watershed,



while a few smaller streams in the hilly sections adjoining the International boundary find their way through a maze of tributaries into the great Mississippi.

The Arctic slope includes the Clearwater river, which flows westerly to join the Athabaska at McMurray, and the Cree and Black rivers, which drain into Lake Athabaska. Other lakes in this district are Cree, Black, Hatchet, and Wollaston, the latter being on the height of land between the Arctic and Hudson Bay slopes. From Lake Athabaska the flow follows the Slave river to Great Slave lake, thence the mighty Mackenzie extends northerly to the Arctic coast.

The northern part of Hudson Bay slope is drained by the Churchill river, of which the Beaver, Montreal, and Reindeer rivers are the main feeders in Saskatchewan. The principal lakes in this section are Reindeer, Lac la Ronge, Lac la Plonge, Montreal, Smoothstone, Doré, Primrose, Cold, Waterhen, Canoe, Ile à la Crosse, Clear, Buffalo, Peter Pond, and Island. The central parts of the plains are drained by the Saskatchewan river and its chief tributary the South Saskatchewan, which joins it a few miles below Prince Albert. Other tributaries include the Battle, Sturgeon, Sturgeon-Weir, and Carrot, while the Red Deer river joins the South Saskatchewan just within the western boundary of the province. These waters flow into Lake Winnipeg at Grand rapids, and are then carried to Hudson bay by the great Nelson river.

The south-eastern part of the province slopes quite perceptibly to the south and east and is drained by the Qu'Appelle, Assiniboine, and Souris rivers. The latter runs across the International boundary for some distance, then makes a sharp detour and returns north, joining the Assiniboine, which in turn joins the Red at Winnipeg. Flowing into the south end of Lake Winnipeg the waters from these various sources pass through it and swell the Nelson on its flow to Hudson bay.

There is but little navigation on any of the inland waters of Saskatchewan. In the early days shallow-draught steamboats plied up and down the Saskatchewan from Grand Rapids to Edmonton, Prince Albert, Battleford, and Fort Pitt being on their line of route. The South Saskatchewan was navigated as far up as Medicine Hat in Alberta. Navigation was difficult owing to shallow water, sand and gravel bars, and rapids, though the course across the province is unbroken by any falls or other interruptions. Lake Athabaska is navigable by steamers from McMurray. The Churchill river is more in the nature of a chain of lakes joined by short stretches of swift-flowing water, usually including rapids and falls which cannot be navigated, thus its route as a waterway is limited to the use of canoes or small boats which can be economically portaged around these numerous interruptions.

No elevations of striking prominence occur. A number of rocky knolls and ridges are found along the Churchill river while the elevations of note in the Plains sections are known as the Porcupine, Duck, Wood, and Moose mountains and the Pasquia, Beaver, Touchwood, Pheasant, Weed, Cypress, and Thickwood hills.

The Geodetic Survey of Canada has projected a number of trunk lines of precise levels following the railway tracks in this province. The following table contains a list of elevations for the more important cities and towns. The elevations given were taken on top of the rail in front of the railway stations as indicated.

PRECISE LEVELS BY GEODETIC SURVEY

Station (top of rail)	Elevation (In feet above sea level)
Regina, C.P.R.....	1,896.4
Moose Jaw, C.P.R.....	1,778.7
Saskatoon, C.N.R.....	1,589.7
Prince Albert, C.N.R.....	1,413.3
Yorkton, C.P.R.....	1,657.8
Estevan, C.P.R.....	1,870.4
Weyburn, C.P.R.....	1,857.3
Swift Current, C.P.R.....	2,432.0
Maple Creek, C.P.R.....	2,507.0
Biggar, C.N.R.....	2,154.0

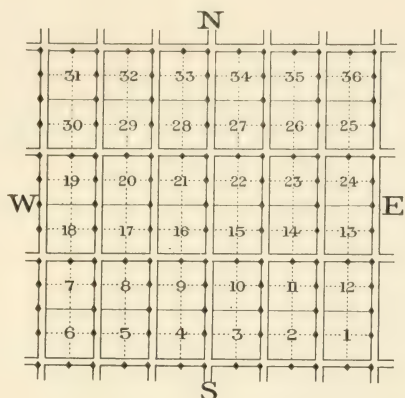
Survey System

Before the Crown lands of the province are thrown open for settlement or otherwise disposed of they are first surveyed into parcels of the required dimension. As the Federal Government gained possession of the entire area now comprising the province before any surveys had been commenced, or any appreciable settlement made, it enabled a regular system of subdivision to be adopted. This has been carried out by the Surveyor-General of Canada, with a staff of especially qualified Dominion Land Surveyors in the field and an office staff of draughtsmen and map-makers, comprising the Topographical Surveys Branch of the Department of the Interior. The Dominion land system of survey is the most comprehensive in the world. It extends uniformly over the whole of the western prairies and is especially adaptable to a plains country. Its checkerboard style enables one to determine the location of a given piece of land, either in the field or on the map, with despatch and accuracy, while its regular north-and-south and east-and-west lines give a succession of rectangular farms. The disadvantages that would arise from any system of survey resulting in triangular fields are only too obvious when one remembers that agricultural operations are now conducted on a large scale throughout the west.

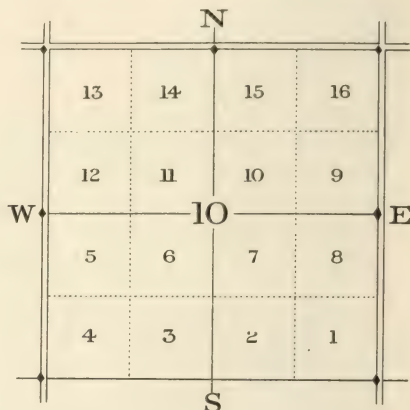
The unit of survey is the township, being a quadrilateral area of approximately six miles square, containing 36 sections, each of 640 acres or 1 square mile, which, on being divided into 4 equal parts, gives the homestead "quarter-section" of 160 acres. The lines bounding a township on the east and west sides are true meridians, and those on the north and south sides are chords of the parallels of latitude passing through the corners of the township. These "block" townships are designated entirely by the numerical system and bear no individual names. Commencing at the 49th parallel of latitude (International boundary) they number from 1 upwards in regular order northerly. Tiers of these are called ranges and they are numbered in regular succession westerly from certain true north and south lines which have been adopted and surveyed as standards. These standards are called "meridians" and those affecting the surveys of Saskatchewan are the Principal, or First, which is located approximately in longitude 97° 27' 30" west, passing about 12 miles west of the city of Win-

SYSTEM OF SURVEY OF DOMINION LANDS

PLAN OF A TOWNSHIP

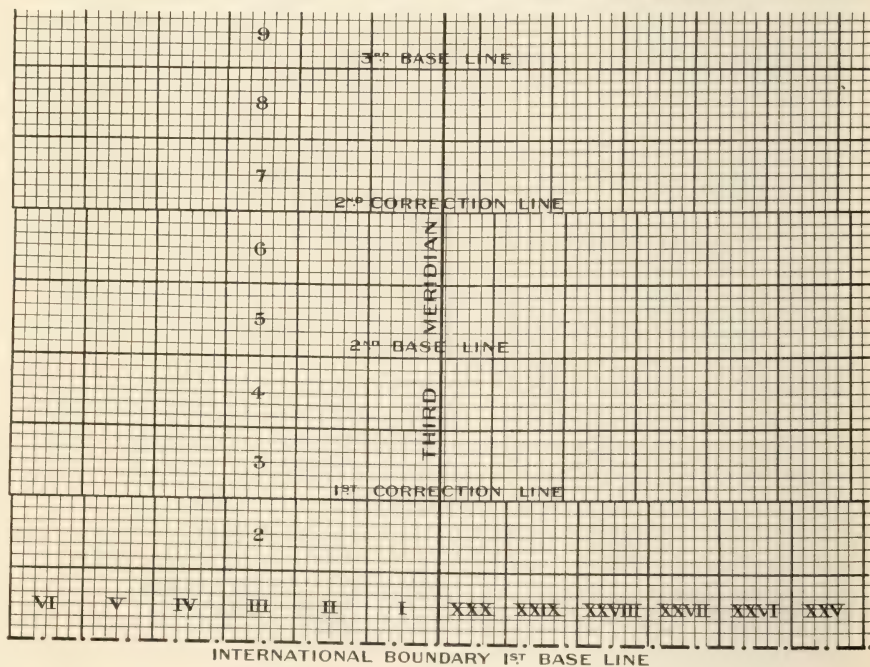


PLAN OF A SECTION



Survey monuments shown thus.....●

TOWNSHIP AND RANGE SYSTEM



Range numbers shown thus... I II III IV
Township shown thus... 1 2 3 4

nipeg; the Second, in longitude 102° west; the Third, in longitude 106° west, and the Fourth in longitude 110° west. Except between the Principal and Second meridians there is a regular interval of 4 degrees of longitude. The eastern boundary of the province is the line between ranges 29 and 30 west of the Principal meridian till it converges with the Second meridian, which is then the boundary. The western boundary is the Fourth Meridian, so that with the exception of a few ranges west of the Principal, the whole of the province lies between the Second and Fourth meridians. The Third meridian passes approximately through the centre of the province.

Quarter sections are denoted according to the quadrants of the compass, northwest, northeast, southwest and southeast quarter-sections, respectively. A location may, therefore, be designated in the briefest and clearest manner and at the same time its location indicated at a glance; for instance, the southwest quarter of section twenty-five, in township thirty-six and range seven, west of the Third meridian, abbreviated thus: S.W. 25-36-7-W. 3. Working reversely, one finds the third meridian approximately in the centre of the province, then looking 7 ranges west and up 36 townships from the International boundary, the required township is located. The sections are numbered from the southwest corner, westerly, across the township from 1 to 6, thence back along the next tier of sections, and across again on the next, and so forth, leaving section 36 in the extreme northeast corner as shown on the accompanying illustration. Section 25 is therefore readily located and from it the desired quarter. Remembering that each township is approximately six miles square, a moment's mental calculation will give the exact location of any piece of land so described.

At 24-mile intervals north of the 49th parallel of latitude lines are run westerly from one principal meridian to the next, following the same parallel of latitude by deflecting at every township corner. These are called "base lines," and are the basis on which the townships are first laid out, the 49th parallel being the first. Commencing at a main meridian, a township is laid out by measuring off six sections of the precise width of 80 chains (1 mile), with a road allowance of 1 chain in width adjoining each. The township outlines are then run north and south to a depth of two townships in each direction, that is, half way to the adjacent base lines on either side. Owing to the convergence and divergence of all meridian lines these township lines will converge north of the base line and diverge to the south of it, hence the lines run north from one base line will not connect with those run south from the next base line above it when the townships come together, but will necessitate a jog. The outlines of the township are completed by joining the corners with east-and-west lines, and the line between townships on which the jogs occur, that is, midway between the base lines, is known as the "correction line."

The interior or subdivision lines of a township consist of north-and-south lines adjoining every section, and east-and-west lines adjoining every second section, with road allowances of one chain in width in all cases. Only one side of a road allowance is surveyed out and marked on the ground, except in the case of correction lines, where it is necessary on account of the jogs to mark the lands on each side of the road independently. Other exceptions arise in certain cases; for instance, where Indian

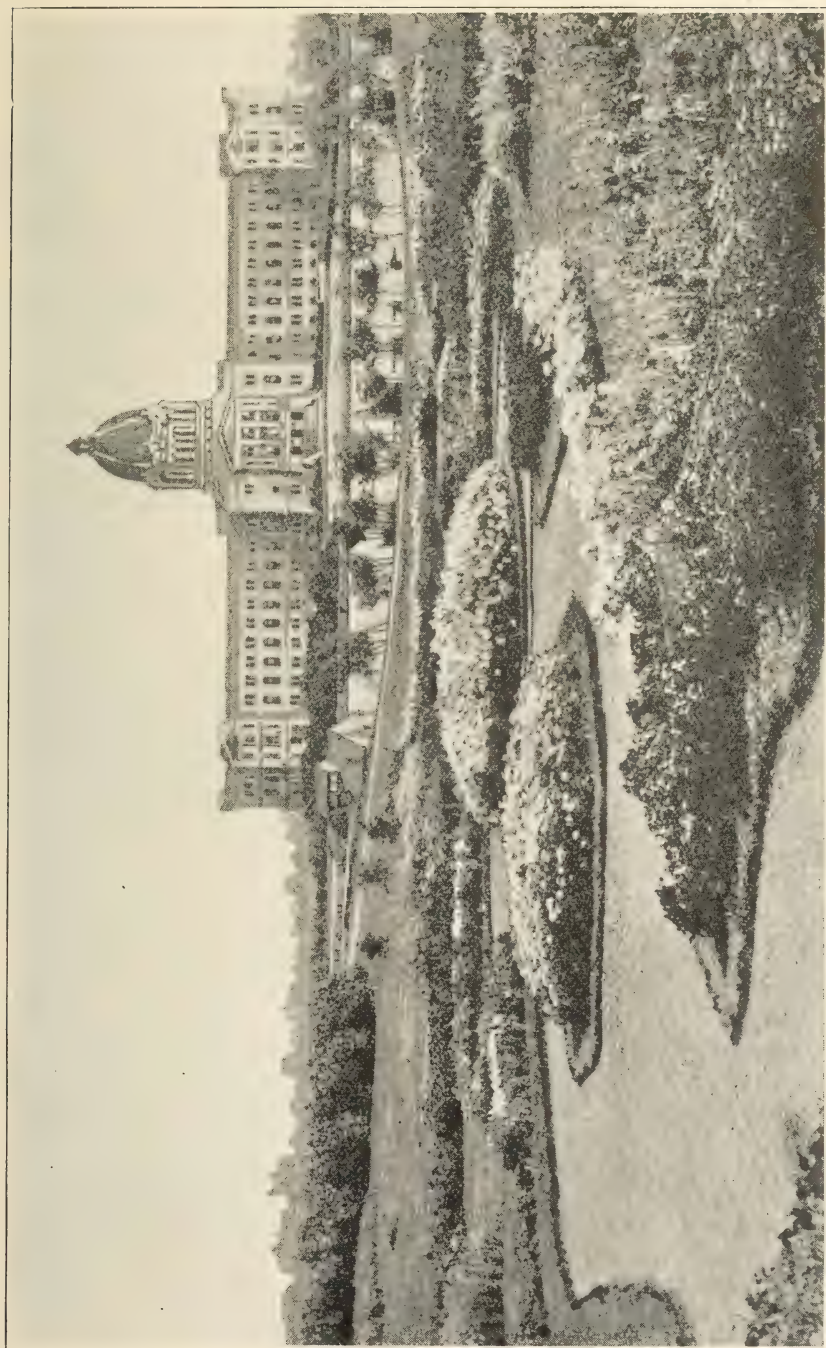
reserves or other irregular parcels of land intervene. The lines regularly run consist of the east boundary of every section and the north boundary of the second, fourth, and sixth tier of sections, that is, the survey monuments will be found on the west and south sides of the roads. A post is planted every half mile, exclusive of road allowances, that is, at every section and quarter section corner along the lines run. Township corners are marked by posts of a larger size than those used for section and quarter-section corners.

In laying out the townships along a base line, the measurements, being carried westerly from one meridian to another, rarely, if ever, give an exact even number, hence fractional townships occur closing on the meridian. Owing to the convergence of these meridians themselves the length of each succeeding base line diminishes, hence the number of township widths or ranges will run out as the system is extended northerly. The accompanying diagrams illustrate the system for all practical purposes.

There are certain modifications in the methods of survey giving rise to five forms or systems, though all are based on the same principle. The system just described is known as the third, and is almost universal. The first and second differ slightly from each other but for all practical purposes they are alike. They differ from the third by providing for a road allowance of one chain and fifty links (a chain and a half) in width on every side of a section. The first system includes the area lying between the eastern boundary of the province and the second meridian as far north as, and including, township 30. The second system embraces townships 1 and 2, ranges 1 to 8 inclusive; townships 19 to 30, ranges 1 to 12 inclusive, and townships 27 to 30, ranges 13 to 16 inclusive, all west of the second meridian.

To facilitate the descriptions for letters patent of less than a quarter-section, every quarter-section is taken to be divided into quarter quarter-sections, each of 40 acres more or less, such quarter quarter-sections are styled "legal sub-divisions," and are numbered from 1 to 16 in similar manner to the numbering of the sections of a township, as shown on the accompanying diagram.

Survey posts were originally of wood, then iron posts were introduced for township and section corners, the former being of larger diameter, while wooden posts were used for quarter-section corners. Later iron posts were used entirely, while during the last few years a new style of tubular post set low in the ground and with a bronze cap has been introduced. The corners were further marked by digging a set of 4 pits about the post, each pit being about 3 feet square and 18 inches deep. In wooded areas a pyramid-shaped mound was also built at the post. Where a corner fell in a pond or other unsuitable place it was perpetuated by erecting a "witness" monument on the line at the nearest edge of such obstruction and recording on the post the distance and direction of the true corner. A circular trench was dug about such post and in the woods a cone-shaped mound was also built. The usual marking of the post is in Roman numerals, giving the number of the section at the northeast corner of which it stands, followed by the township and range, for instance, XV, XXIV, VIII reads northeast corner of section 15, township 24 and range 8. The meridian is not stated, as a locator will know this. A quarter-section post is merely marked " $\frac{1}{4}$."



Parliament Building, Regina

It will be observed that the lines of this system of survey are run out on the ground irrespective of topographical irregularities except in the case of large bodies of water or inaccessible mountains. The land is thrown open for homestead on the basis of such survey. The old "trails" of the prairies followed the most direct routes or lines of least resistance, so that new roads are required to keep pace with settlement. It is often found impracticable to construct such exactly within the confines of the stereotyped "road allowances." Ponds, steep cut-banks, or other obstacles frequently occur. Hence the highway engineers of the province, who construct the roads, find it necessary to make "road diversions," which are laid out around such obstacle by provincial surveyors, usually district engineers of the provincial highway department.

A number of small settlements, chiefly along river valleys, had taken place before the regular system of survey had reached such districts. In order not to molest conditions and to allow each settler to retain his improvements as far as possible, the regular survey was suspended for the extent of such areas, and "settlement surveys" substituted, the individual parcels of land being laid off to the best advantage to all concerned and given lot numbers.

There is another form of survey which may be used in remote parts of the country, chiefly resorted to in survey of mineral claims, namely the "group lot." Parcels of land so surveyed are designated by lot and group numbers, which are furnished the field surveyor on application to the head office.

Surveys on federal lands are made by Dominion Land Surveyors, but recently an Association of Saskatchewan Land Surveyors has been formed with provincial jurisdiction, to whom are entrusted such surveys as concern lands under the authority of the Provincial Government. The original survey of a homestead would be made by a federal surveyor, but a subdivision of such parcel of land after the Crown grant had been issued would fall within the scope of the provincial surveyor.

GOVERNMENT

Canada is a self-governing Dominion and an integral part of the British Empire, and consequently enjoys such benefits as national protection, trade advantages and other favours. The constitution leaves her to all intents and purposes the fullest privilege of domestic self-government.

The government of Canada is modelled after that of Great Britain, where nominally the Sovereign rules, but in reality the government of the country is controlled by the elected representatives of the people. The British Parliament is composed of two houses, the Lords and the Commons, and from these Houses an executive council, called the Cabinet, is chosen. The Cabinet, which constitutes the real governing body of the country, is responsible to the popularly elected House of Commons and must account to that body for all its acts. The leader of the Cabinet, called the Prime Minister, or Premier, is in reality the actual head of the country's affairs, as the Sovereign acts only on the advice of his Ministers, that is, of the Cabinet.

To represent the Crown in Canada, the Sovereign, on the advice of his Cabinet (who give their advice only after consulting the Dominion government) appoints a Governor General, who resides in the capital city of the Dominion during his term of office. Like the Sovereign, he is nominally head of the Canadian government, but he too acts only on the advice of his Ministers.

The Dominion Parliament consists of two houses, the Senate and the House of Commons. The members of the Senate are appointed for life by the Governor General, on the advice of his Ministers. The Commons are elected by the people every five years, or at lesser intervals should Parliament for any reason be dissolved within that time. In practice the life of a Parliament in Canada rarely extends beyond four years.

The leader of the political party having the majority in the House of Commons forms a government, choosing a number of his parliamentary supporters, as a rule from the Commons, though sometimes a few from the Senate, and these together with himself constitute the Cabinet. He himself heads the Cabinet as Prime Minister, or Premier; the other cabinet members take charge of the various departments of the government's business and are styled Ministers. Subject to the constitution and to the legislation enacted by Parliament, and with full responsibility to the House of Commons for all their acts, they carry on the business of the country. Should the government or Cabinet lose the confidence of the people's representatives and suffer a defeat in the House of Commons, or lose the confidence of the people and fail to have a majority of supporters elected at a general election, the Governor General receives the resignation of the Prime Minister and his colleagues and calls on the leader of their opponents (called the Leader of the Opposition) to form a new government or Cabinet.

Each province has representation in the House of Commons in proportion to its population; the membership of the Senate, however, is now

fixed at 96. The membership of the two houses of the Dominion Parliament is now made up as follows:

Province	Commons	Senate
Ontario.....	82	24
Quebec.....	65	24
Nova Scotia.....	16	10
New Brunswick.....	11	10
Prince Edward Island.....	4	4
Manitoba.....	15	6
Saskatchewan.....	16	6
Alberta.....	12	6
British Columbia.....	13	6
Yukon (Territory).....	1	
Total.....	235	96

Several changes in the representation, in accordance with the census of 1921, will become effective after the next election.

Each province has a government formed along lines similar to that of the Dominion government. At the head is a Lieutenant-Governor appointed by the Governor-General, on the advice of the Dominion government, for a term of five years. His duties in the province correspond to those of the Governor-General in the Dominion. Though nominally head of the province's affairs, he acts on the advice of his Ministers. It is his duty, however, to veto any legislation which in his opinion might be detrimental to the interests of the Dominion at large. In the majority of the Provinces there is one legislative body only, elected by the people, and called the Legislative Assembly.

In each province the Lieutenant-Governor calls upon the leader of the party having a majority of supporters in the Assembly to form an Executive Council, the leader being the Premier. This Council, subject to certain restrictions and responsibilities, carries on the business of the province. The Legislative Assembly of Saskatchewan now consists of sixty-three members. The Executive Council consists of the Premier and six other members.

The government of each province has control of legislation and matters especially of a more local nature affecting the province, while the Federal government controls matters of a wider nature, in accordance with the provisions of the British North America Act. The Legislature of each province exclusively may make laws relating to education within the Province. There are also certain subjects, such as agriculture and immigration, over which both the Dominion and the provincial governments have jurisdiction; but, in case the law passed by the province does not agree with that passed by the Dominion, the latter governs. Any law passed by a provincial government may be disallowed by the Dominion government within one year after the receipt of an official copy of the Act. This, however, is very seldom likely to occur, except when the Act is one that interferes with the general welfare of Canada or the Empire.

Following out the basic principle of self-government which characterizes the success of British rule everywhere, the provincial government grants to local bodies of her residents the rights to manage their own affairs as they desire, restricted only in so far as necessary for the well-

being of the province at large. In Saskatchewan four forms of municipal government are provided for, according to the progress and population of the community. Three provide for urban centres and one for rural settlements. The urban municipalities are graded into three classes, cities, towns and villages. The urban municipalities receive their incorporation from the provincial government and all are under the special care of a Municipal Commissioner. They elect their own officers, fix their assessment and tax rate, raise and spend money, make by-laws, and generally look to their own advancement and welfare under several provincial and federal regulations. Saskatchewan had, in 1921, seven incorporated cities, 78 incorporated towns, and 345 incorporated villages.

The Saskatchewan government at the close of 1922 was composed of the following:—

Lieutenant - Governor.....	His Honour H. W. Newlands, K.C.
Premier, President of Council, Provincial Treasurer, and Minister of Railways.....	Hon. Chas. A. Dunning
Minister of Public Works, and Minister of Telephones.....	Hon. A. P. McNab
Minister of Education, and Minister in charge of Bureau of Publica- tions and King's Printer's Office.....	Hon. Samuel J. Latta
Minister of Agriculture and Minister of Municipal Affairs.....	Hon. Chas. M. Hamilton
Attorney General and Minister in charge of the Bureau of Child Protection.....	Hon. James A. Cross
Minister of Highways and Minister in charge of the Bureau of Labour and Industries.....	Hon. James G. Gardiner
Provincial Secretary and Minister in charge of the Bureau of Public Health.....	Hon. J. M. Uhrich

The various forms of government, as affecting citizens of Saskatchewan, are outlined in the following chart:—

I. Imperial.....	{Sovereign Parliament.....	{House of Lords House of Commons
	Cabinet.....	{Premier Ministers
II. Federal.....	{Governor General Parliament.....	{Senate House of Commons
	Cabinet.....	{Premier Ministers
III. Provincial.....	{Lieutenant-Governor Legislative Assembly Executive Council.....	{Premier Ministers
IV. Municipal.....	1. City.....	{Mayor Aldermen
	2. Town.....	{Mayor Councillors
	3. Village.....	{Overseer Councillors
	4. Rural Municipality.....	{Reeve Councillors

The Judicial System

The divisions of the judicial system in Saskatchewan are as follows: (1) Court of King's Bench, (2) Court of Appeal, (3) County Courts, (4) Surrogate Courts and (5) Minor Courts.

The Court of King's Bench consists of a chief justice, styled the "Chief Justice of the Court of King's Bench," and six puisne judges. This court possesses all the powers and authorities of jurisdiction in civil and criminal matters as are vested by the laws of England in a Supreme Court. Its practice and procedure are practically those prevailing in England at the present day. It also exercises the jurisdiction and powers

of the Court of Chancery in England in respect to many matters. Criminal jurisdiction is exercised under the provisions of the Criminal Code of Canada.

The Court of Appeal consists of a chief justice and four puisne judges, who are also *ex officio* judges of the Court of King's Bench. The court as at present constituted has existed since 1906, prior to which date the judges of the Court of King's Bench sitting *en banc* exercised jurisdiction as a Court of Appeal.

County courts are provided in various judicial districts, of which there are at present 21, namely:—

Prince Albert,
Moosomin,
Saskatoon,
Yorkton,
Arcola,
Battleford,
Moose Jaw,
Regina,
Weyburn,
Swift Current,
Assiniboia,

Humboldt,
Kerrobert,
Kindersley,
Wynyard,
Estevan,
Wilkie,
Melville,
Gravelbourg,
Cypress,
Melfort.

One or more judges may be appointed for each county court or judicial division.

Deputy judges may also be appointed in county courts. Every county court judge is *ex officio* a justice of the peace for the province, and possesses all the powers of two or more justices of the peace. These judges must reside in the county or district in which they preside. Clerks and bailiffs for the county courts are appointed by the Lieutenant Governor in Council. Matters civil and criminal of certain limitations are dealt with by these courts, from which appeals may be carried under prescribed restrictions to the Court of Appeal.

A Surrogate Court is provided in each judicial district, of which the senior county court judge is *ex officio* judge. Other offices are the surrogate registrar and the surrogate clerk, respectively. These courts have jurisdiction in all matters relating to the probate of wills and letters of administration and have practically the same powers as the Court of King's Bench sitting as a court of probate.

Minor courts include all those of inferior jurisdiction presided over by stipendiary magistrates, police magistrates and justices of the peace. The powers and functions of the presiding officers are similar to those vested in such officers by competent authority in the province of Canada.

Judges of the Court of King's Bench, Court of Appeal and County Courts are appointed by the Governor General in Council and the appointments are permanent. Sheriffs of the various judicial districts, registrars, clerks and official administrators are appointed at pleasure by the Lieutenant Governor in Council. Stipendiary magistrates, justices of the peace and police magistrates also hold their commissions from the Lieutenant Governor in Council.

Citizenship

A person must be a British subject in order to hold public office in Canada, whether under Dominion, Provincial or Municipal governments, to vote in any election, or to obtain a deed for a homestead.

There are many other great advantages in being a "full citizen" of the country of one's adoption, and those who come to Canada from foreign shores with the intention of making it their permanent home will be well advised to take out naturalization papers at the earliest date allowed by law.

The Naturalization Acts of 1914 and 1920 set forth in detail the procedure to be followed by an alien desiring to become a British subject. The authority to issue certificates of naturalization is vested in the Secretary of State of Canada, Ottawa, but proceedings are conducted through the Courts. Aliens should make application to the clerk of the nearest Superior, District, or County Court of the district in which they live. To be eligible the applicant must show: (a) That during the last eight years he has resided for at least five years in any of His Majesty's dominions, the year immediately preceding the application being spent entirely in Canada, a period of service under the Crown being treated as an equivalent period of residence; (b) that he is of good character and has an adequate knowledge of either the English or French language; and, (c) that he intends, if his application is granted, to reside in His Majesty's dominions or continue in the service of the Crown.

Certificates of naturalization are, except in special cases, issued only to males of the full age of twenty-one years or over, and to females who are single or widowed and are also of legal age. An alien may, however, on taking out naturalization papers apply to have included the names of his children who are minors, and living in Canada, and such children shall become British subjects on the issuing of the parent's certificate bearing their names. The national status of a married woman is deemed to be that of her husband, that is, a wife of a British subject, in the eye of the law, is a British subject and the wife of an alien is an alien.

Saskatchewan has universal suffrage. In municipal affairs the right to vote is usually restricted by property qualifications, equally applicable to both male and female.

The franchise in provincial elections extends to all British subjects, both male and female (except Indians ordinarily resident on an Indian reservation), who are of the full age of 21 years, provided they have resided in the province during the year, and in the electoral division in which they propose to vote during the three months immediately preceding the election involved, and that their names are on the voters' lists. Voters' lists are posted in conspicuous places in each polling division prior to an election and an opportunity is given persons entitled to vote, whose names may be omitted, to have them added. It is the duty as well as the privilege of every citizen entitled to vote to see that his name is on the voters' list and to exercise the franchise to the best of his ability.

The unrestricted freedom and privileges given in the ballot are symbolic of the generous treatment and individual liberty the citizen of a British domain enjoys. The unexcelled educational advantage, the religious freedom, the opportunity to found a freehold home and establish

a means of livelihood are all that it is possible for a paternal country to supply. In the province of Saskatchewan the home-seeker will find a haven of civil and religious liberty, the opportunity to gain personal success, and the right to leave to his descendants and posterity in general a heritage of freedom and prosperity.

Militia and Police

The Military, Naval and Air Services of Canada, as well as the Royal Canadian Mounted Police, are under the control of the Federal Government. Units of the military service, however, both permanent and non-permanent, are located in the several provinces of the Dominion, and of the naval service on the Atlantic and Pacific seaboard. The Air service is but a comparatively new branch of defence and is being organized at Ottawa. Until recently the Royal Canadian Mounted Police were known as the Royal Northwest Mounted Police, and their territory was restricted to the western and northern parts of Canada. Now they have jurisdiction over the whole Dominion, with headquarters at Ottawa. In addition to representatives of these national forces, the province maintains a force of Provincial Police, and the various cities and towns have their local police departments. There are also a number of special officers, game guardians, and others whose duty it is to uphold law and order.

Under normal conditions military training is not compulsory in Canada. The permanent militia and the naval service offer a field of enlistment for limited numbers of young men who seek careers in the profession of arms, while the non-permanent militia offers an opportunity for short annual periods of training in summer camps. Recruiting for the Royal Canadian, provincial and city police offers to limited numbers of men opportunities for such service.

The Militia Act of Canada provides (Section 10) that: "All the male inhabitants of Canada, at the age of eighteen years and upwards, and under sixty, not exempt or disqualified by law, and being British subjects, shall be liable to service in the militia: Provided that the Governor-General may require all the male inhabitants of Canada, capable of bearing arms, to serve in the case of a levee en masse."

Section 69 further enacts that: "The Governor in Council may place the militia, or any part thereof, on active service anywhere in Canada, and also beyond Canada, for the defence thereof, at any time when it appears advisable so to do by reason of emergency."

There are located in Saskatchewan a number of military establishments, comprising units of both the permanent and non-permanent active militia of Canada. Included are many well-known combatant units as well as complete complements of non-combatant services.

Revenue

Funds necessary for the carrying on of the country's affairs by these legislative bodies are secured from various sources, of which taxation, in its many forms, is the main source. Revenues derived from the exploitation of the country's natural resources constitute most of the balance. The Federal government administers the customs tariff, which is the chief source of its revenue.

The provincial governments receive an annual subsidy from the Dominion government. In the case of Saskatchewan this subsidy is augmented considerably in lieu of Crown lands and natural resources, which are still under the administration of the Dominion Government, and of school lands held in trust by it. The subsidy for the year ending April 30, 1922, was \$1,753,075, and the school lands fund was \$1,203,088.64, giving a total revenue from the Dominion of Canada of \$2,956,163.64 for the year ending 30th April, 1922. This is augmented by certain direct taxation which the provincial government levies for its own use, and by various commissions, duties and fees collected by the several departments.

The levies made by the province directly on the land are embodied in the following acts; (1) The Supplementary Revenue Act, 1917, provides for a tax of one cent per acre, the proceeds of which are to be used for the support of educational institutions. Where Crown lands are held under lease for grazing purposes from the Government of Canada, the amount of the tax to be levied annually in respect of such lands is one-half cent per acre. (2) The Wild Lands Tax Act, 1917, aimed to strike at the absent land owner or land speculator, provides for a tax of one per cent of the assessed value of lands so held. The proceeds of this tax form part of the consolidated fund of the province and are used for general revenue purposes. Certain lands are exempt from this taxation, such as, for instance, lands held under pre-emption entry and lands wholly unfit for cultivation. (3) The Public Revenue Act, 1917, provides for a tax of one cent per acre, the proceeds of which form a part of the consolidated fund of the province and are used for the support of Red Cross, patriotic and other relief purposes. In municipalities, the tax is levied annually by a special rate to an amount equal to two mills in the dollar on the total value of all the rateable property in the municipality. In local improvement districts, a tax of one cent per acre is levied upon every owner or occupant of land situate therein and upon such land. The rate to be levied in respect of Crown lands held under lease from the Government of Canada for grazing purposes is one-fifth of one cent per acre.

The total revenue received by the Provincial Treasurer from all sources during the twelve months ended April 30, 1922, was \$24,608,702.54.

Municipalities raise their money by direct taxation. Each has its assessor, whose duty it is to prepare an annual statement showing all lands within the boundaries of the municipality together with the owners' names thereof, to set a valuation on such lands and on the buildings and improvements thereon, and to prepare a roll of the adult population of the municipality showing the value of the personal property and the amount of income of each. A tax is then levied to meet the estimated requirements of the ensuing year. The systems adopted vary somewhat, but the usual method is to levy the tax against the full value of the land and to exempt certain percentages of all other assessments. Provision is made on the one hand for appeals from the rolls of the assessor and on the other for the collection of arrears of taxes. Drastic methods of collection are resorted to when payment of taxes is unduly neglected. The Rural Municipality Act was amended in 1916 to allow of wider concessions by way of exemption from taxation of the soldier's home, the Arrears of Taxes Act being modified accordingly. The Village Act was

also altered to provide that the home of the soldier, or the home of his wife, in any village is totally exempt from taxation during the period of his enlistment.

Several communities on the frontiers of the province where settlement is gradually developing have been organized as Local Improvement Districts. The rate of taxation in each of these was, up to the end of last year, one and one-quarter cents per acre, excepting in the case of leaseholders, who were required to pay only three-quarters of a cent per acre. Taxes in these unorganized districts are levied by the Department of Municipal Affairs, to which they are payable. The amounts secured are disbursed for road and similar improvements throughout the communities concerned.

The fixing of assessment valuations has been a difficult task. The assessed values of rural properties has generally been very moderate. The rural districts have also avoided the undertaking of expensive improvements such as have caused the embarrassment of a number of urban centres that were unduly anxious to make rapid development. The burden of taxes may generally be considered most moderate in rural districts and the smaller urban centres. Those large municipalities that have undertaken excessive improvements found taxes fairly heavy owing to the temporary distress caused by the war, but with the influx of population conditions may be expected to improve.

The Town Planning and Rural Development Act recently passed by the legislature is a progressive step looking to the future welfare of the municipalities of the province. A director of town planning will be associated with the Department of Municipal Affairs, whose duty it will be to assist in the preparation of by-laws and plans for the encouragement of growth along proper aesthetic and health-ensuring lines. A marked tendency on the part of the larger towns and cities to curtail their expenditures and borrowings as far as possible consistent with the upkeep requirements indicates an attitude of sound management and civic economy.

Government Agencies

It has been mentioned that the Federal Government still exercises control over the natural resources of the province. All vacant Crown lands, including homestead lands, are administered by the Department of the Interior. Timber, grazing, and mineral lands are also administered by this Department. The fisheries are under the control of the Fisheries Branch of the Department of Marine and Fisheries, while the welfare of the forest lands generally is looked after by the Forestry Branch of the Department of the Interior. To facilitate the transaction of official business the province has been divided into Dominion Land Districts, which are in charge of local agents. Business in connection with homesteads, grazing leases, timber permits or licenses, and the recording of mineral claims may be dealt with directly at the office of the agent in whose district the lands affected are situated. The office of the district inspector for the Forestry Branch is located at Prince Albert. The chief inspector of fisheries for the province has his office at Indian Head, while two district inspectors for Northern and Southern Saskatchewan,

respectively, are located at Prince Albert and Indian Head. The Dominion Land Districts are as follows:—

District	Office at
Moose Jaw Land District.....	Moose Jaw
Swift Current Land District.....	Swift Current
Saskatoon Land District.....	Saskatoon
Prince Albert Land District.....	Prince Albert
Battleford Land District.....	Battleford
*Edmonton Land District.....	Edmonton

*On account of the natural facilities for travelling to and from the north-westerly part of the province making Edmonton a more accessible point than any town or city in Saskatchewan a certain area in this section has been placed in the Edmonton Land District.

Matters of registration are administered by the Provincial Government. When a homesteader completes his duties and obtains his patent from Ottawa, he receives from the Crown his right and title to the land affected, and it then automatically goes under the jurisdiction of Provincial legislation. The province has been divided into the following Land Titles or Registration Districts:—

District	Office of Registrar at
Moosomin.....	Moosomin
Assiniboia.....	Regina
Canington.....	Arcola
Moose Jaw.....	Moose Jaw
Yorkton.....	Yorkton
Saskatoon.....	Saskatoon
West Saskatchewan.....	Battleford
East Saskatchewan.....	Prince Albert
Humboldt.....	Humboldt
Swift Current.....	Swift Current

TRANSPORTATION AND COMMUNICATIONS

Before the building of railways transportation across the plains was by canoe on the extensive river systems and by wagon. The main routes for the fur traders were by the north and south branches of the Saskatchewan river and tributaries and by numerous lakes in the northern part of the province, giving access to the country adjoining the international boundary line on the south, and to the great Mackenzie valley on the north. The same method of travel still prevails in the northern half of the province, where the railways have not yet penetrated. The rivers of Saskatchewan are of considerable magnitude but, owing to shallow depth, they are serviceable only for boats of light draught. Saskatchewan and Alberta are the only two provinces in Canada which have no direct communication with the sea.

Roads and Trails

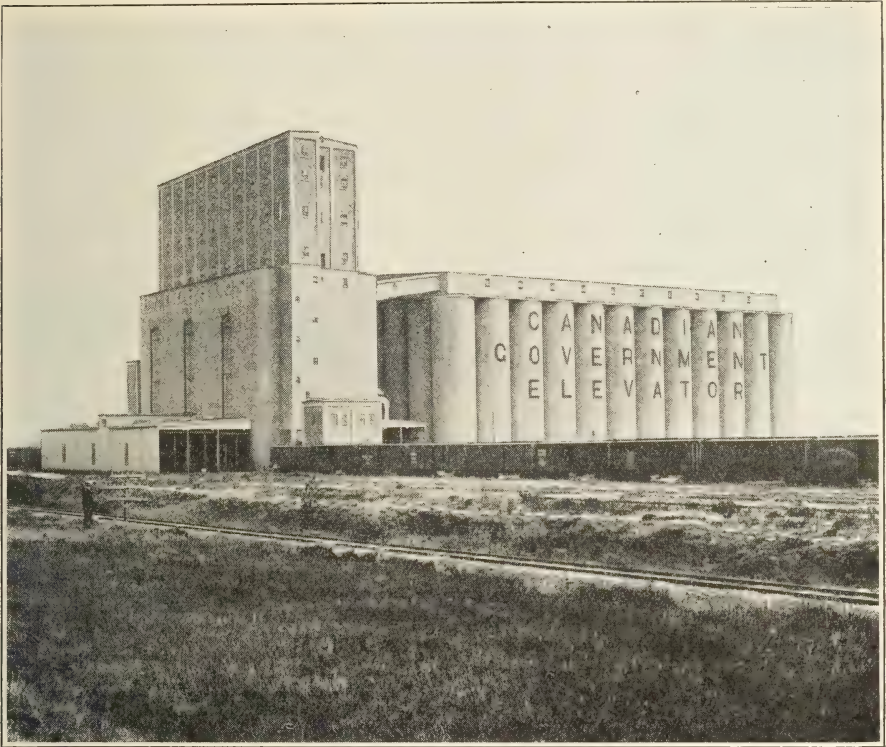
Owing to the densely wooded condition of the country, the earliest settlements in Canada were made along the shores of the St. Lawrence, the Great Lakes, and the Atlantic coast. Roads were gradually constructed and the difficulties of transportation in eastern Canada were relieved in a measure before the building of railways. On the prairies no natural obstacles to road-making existed: there were no forests to be felled, no abrupt heights to be overcome. Vast herds of buffalo had left a net-work of trails, which the Indians used as primitive routes of travel. These trails were the first prairie roads. The rectangular system of survey and the fencing in and ploughing up of the land by the ever-spreading tide of settlers had gradually obliterated these early trails but a few were permitted to remain and have been surveyed and established as permanent highways. Such historic routes as the "Fort Qu-Appelle and Duck Lake Trail" or the "Battleford and Fort Edmonton trail" could not be permitted to pass into oblivion without a distinct loss to the province.

The advantages of "good roads" are now realized in earnest, and everywhere in Canada strenuous efforts are being made to improve rural conditions. Saskatchewan is fully alive to the importance of such works and is keeping pace with the other provinces. She has the natural advantage of an open and level country, free from rocks and easy to grade and drain. Gravel and sand are widely distributed and much glacial drift is found which makes admirable road material. The success of the farm is enhanced by the ease of reaching the markets, and the pleasures are multiplied by the splendid roads extending in every direction, giving outlets for pleasure drives by motor car or horses wherever desired. The country roads of the province are not being neglected.

The construction and maintenance of highways is in charge of a special department of the Provincial Government. Roads, bridges and ferries are provided to meet the requirements of the various outlying districts as rapidly as they are settled, while improvements are constantly being carried on in the older settled parts of the province. As an evidence of the extent and satisfactory condition of the system of highways extend-

ing throughout the province, one has only to observe the great number of automobiles seen on the roads everywhere or parked in any town or village on a market day.

The number of motor vehicles registered in Saskatchewan in 1921 was 61,184, of which number 59,061 were passenger cars. The revenue from motor vehicle licenses during the fiscal year ending 30th April, 1922, was \$701,492.50.



Canadian Government Elevator, Saskatoon.

The increase in use and manufacture of motor vehicles has been the chief cause stimulating the recent improvement in the roads of Canada. In each province the roads are under the control of the provincial authorities, but to assist in a nation-wide movement the Dominion Government in 1919 passed the "Canada Highways Act," by which the sum of \$20,000,000 was appropriated to aid the several provinces in developing good roads. Portions of this appropriation are to be paid each year for five years and highways are to be constructed under agreement with each province. This act has been supplemented by further acts passed by the Provincial Legislatures. During the twelve months ending 30th April, 1922, the Government of Saskatchewan expended \$1,148,296.86 on the construction and improvements of roads. The mileage on January 1, 1922, showed a total for the province of 135,000 miles.

In laying down the system of roads, the provincial authorities recognized that the province is almost entirely agricultural, and that the main economic problem is the transporting of agricultural produce raised in

Saskatchewan to the nearest market in the shortest space of time and at the least possible cost to the farmer. The system adopted by the province embraces approximately 32,000 miles of main market roads.

In railway service the province has been singularly fortunate. As the prairies made easy the acquiring of roads and trails, so the position of the province with respect to the rest of Canada has solved her railway problems to a major extent. When British Columbia joined the Dominion in 1871 it was stipulated that a railway to connect her with the older provinces should be immediately constructed. Hence the Canadian Pacific Railway was built, and the prairies of Saskatchewan were traversed by a line of steel which served to encourage the large number of settlers attracted to these districts. This line was well in advance of settlement, the population of the Northwest Territories at the time being very meagre. It kept well to the south, though the original location aimed to follow the great fertile Saskatchewan valley farther north. This was accomplished by a second transcontinental railway some twenty years later, namely, the Canadian Northern Railway, now a part of the Canadian National Railways. When the province was inaugurated in 1905 there were two lines of railway traversing its most valuable farming sections from east to west and already throwing out branch lines and feeders.

Still another great transcontinental railway was to stretch its long lines of steel across the province, paralleling the former lines but lying far enough from either to afford service to an area beyond the economic reach of them, namely, the Grand Trunk Pacific Railway, now also part of the Canadian National Railways. Thus, lying in the path of these three great transcontinental systems, the province has been supplied with a framework of railways from which feeders easily may reach every part. Expansion has been very rapid until the last few years, when, owing to the great war, all railway construction in Canada had to be curtailed. The east and west lines have been more than duplicated, while a decided growth in a general north and south direction has been prosecuted, with Regina, Saskatoon and Prince Albert as the main points en route. The Canadian Pacific Railway early secured a southern outlet to Minneapolis and St. Paul, while the Canadian Northern pushed branches northward to connect with the Hudson Bay project at The Pas and north of the Saskatchewan River to Big River and the Turtleford District.

At the inception of the province in 1905 the Canadian Pacific had 1,090 miles within its borders and the Canadian Northern had 462, a total of 1,552 miles. The Grand Trunk Pacific was then not started. In 1917, twelve years later, the Canadian Pacific had 2,779 miles of road, the Canadian Northern 2,206 and the Grand Trunk Pacific 1,164, a total of 6,149 miles, or an increase of about 400 per cent. The total mileage in 1920 was 6,268 miles.

As the older sections of the province become more densely settled, and the acreages under crop are increased, additional branch lines and feeders will become necessary to meet increased requirements. The opening up of coal and clay areas also will make additional railway service necessary.

A line northeasterly from Prince Albert, to tap the great forest and agricultural areas about Candle and Cumberland lakes, the water-powers of the Sturgeon-Weir river, the gold and copper fields of Amisk Lake and Northern Manitoba, and connecting easterly with the Hudson Bay section,

would no doubt open up vast resources. The Big River branch might well be extended northerly to Beaver river, and even to Ile à la Crosse, to tap the great fisheries resources of these inland waters. The Turtleford Branch from Battleford might be swung westerly to traverse the great agricultural district lying between the Beaver and Saskatchewan rivers, and if extended as far as Edmonton would serve a district in Alberta already settled but in dire need of a railway.

These interests of the province are looked after by a Department of Railways, which has given encouragement and substantial assistance in the guarantee of bonds and otherwise to various branch lines built within her limits.

The following table gives a summary of the track and station situation existing in the province in 1920.*

Railway	Miles track	Depots	Loading platforms	Elevators	Ware-houses	Freight sheds	Stock yards
Canadian Pacific railway.....	2,776.50	373	375	1,095	299	250
Canadian National railways:-							
Canadian Northern.....	2,323.87	199	320	730	17	73	214
Grand Trunk Pacific.....	1,168.35	155	201	314	94	19	90
Total.....	6,268.72	727	896	2,139	111	139	554

*Report of Department of Railways, Saskatchewan, 1921.

The express business of the province is fully provided for by the Canadian National and Dominion Express Companies, whose operations cover all lines of steel.

Street Railways

Three cities of Saskatchewan are provided with electric street railways, namely, Regina, Saskatoon and Moose Jaw. Regina began operations with a municipally owned system in July, 1911. Moose Jaw followed with a privately owned system in September of the same year. Saskatoon, like Regina, decided on a municipal system, which commenced operating in January, 1913. The equipment and service of these railways is of a high standard and has been of inestimable value to the cities served in stimulating their growth. They have all been successfully operated for some years and may be expected to expand to meet the growth of urban centres. Further particulars are shown on the following table.*

Particulars of system	Regina municipal railway	Saskatoon municipal railway	Moose Jaw Electric Railway Company
Commencement of operations.....	July 29, 1911	Jan. 1, 1913	Sept. 4, 1911
Miles of line.....	34.52	16.84	12 (approx.)
Average number of employees.....	125	126	50
Passengers carried.....	6,092,943	4,541,523	2,175,455
Passenger cars.....	34	24	21
Freight cars.....	29
Work cars.....	1	2	1
Snow-ploughs.....	1	1	1
Sweepers.....	2	1

*Report of Department of Railways, Saskatchewan, 30th April, 1921.

Waterways

The waterways of Saskatchewan, though of little commercial importance in comparison with those of most of the other provinces, are nevertheless worthy of attention. Considerable historic interest is attached to them. The earliest explorers to reach the prairies came by canoe. La Verendrye, with his three sons and a nephew, blazed the way during the years 1731 to 1748 and traversed the Qu'Appelle, Souris and Saskatchewan rivers. De Niverville ascended the Saskatchewan in 1751 as far as the Rocky mountains. Anthony Hendry also crossed the province by way of the Saskatchewan in 1754.

The rapidly expanding fur trade soon created activity along the many water routes now embraced within the limits of the province and made famous by two centuries of use. The Assiniboine, Qu'Appelle and Souris, with Manitoba's famous Red river, were for long years the highways of commerce and discovery for the adventurers of New France who came by way of Lake Superior, or the traders of the Hudson's Bay Company striking in from York Factory, both anxious to outdo the other in securing the pelts of the prairies or gaining a foothold in the valley of the Missouri. The mighty Saskatchewan, most famous of all, and which gives its name to this province, is the outstanding river of the prairies of Canada. Two main branches, the north and the south, which with their tributaries, constitute the entire drainage of three hundred miles of the eastern slope of the Rocky mountains, unite below Prince Albert and enter Lake Winnipeg.

For many years the Canadian Pacific was the only railway of Western Canada and, as it crossed the southern parts of the prairies, the Saskatchewan river became the highway of commerce for the north. Flat-bottomed, stern-wheeled river boats plied regularly the waters of the main branch from Grand rapids at Lake Winnipeg to Prince Albert, Battleford, Fort Pitt (now in ruins), and even up to Edmonton, in the adjoining province of Alberta. The south branch was also navigated past the present city of Saskatoon, around the "big bend," and up to the forks of the Red river, at the western boundary of the province, and sometimes beyond as far as Medicine Hat. Like the historic boats of the Mississippi, the boats of the Saskatchewan have almost disappeared, as the more speedy overland routes have encroached on their territory. The Battle, Carrot and Torch rivers are tributaries within the province and are now chiefly used in rafting logs to the mills.

Another famous waterway is the Churchill, whose headwaters are in this province. Colossal fortunes in furs were transported by this route. The Athabaska brigades, paddling up the Clearwater and packing their burdens across the Methye, or "long", portage, followed this famous route to Hudson bay. It is a decidedly picturesque route. Unlike the Saskatchewan, which retains its uniformity throughout, the Churchill becomes a series of crystal lakes, nestled among hills of granite, dotted with myriads of beautiful islands, and connected by short stretches of river proper. These usually contain rapids and falls, which compel the voyageur to portage his canoe, and forbid the passage at any hazard of power boats. In place of the meadows and fertile valley of the Saskatchewan are found low swamps of spruce and tamarack, or rugged hills of upheaved rocks, partly bare and partly wooded with groves of jack-pine or clusters of birch.

Near the eastern limit of the province is an alternative route, which the early traders usually made use of. Leaving the Churchill at Frog portage, the way lay nearly south, following a chain of lakes leading to the Sturgeon-weir river, thence by way of Amisk, Namew and Cumberland lakes to join the Saskatchewan. This diversion brought the French traders to their posts at The Pas, and allowed the English to reach tide water at York Factory by way of Hayes river, their principal route.

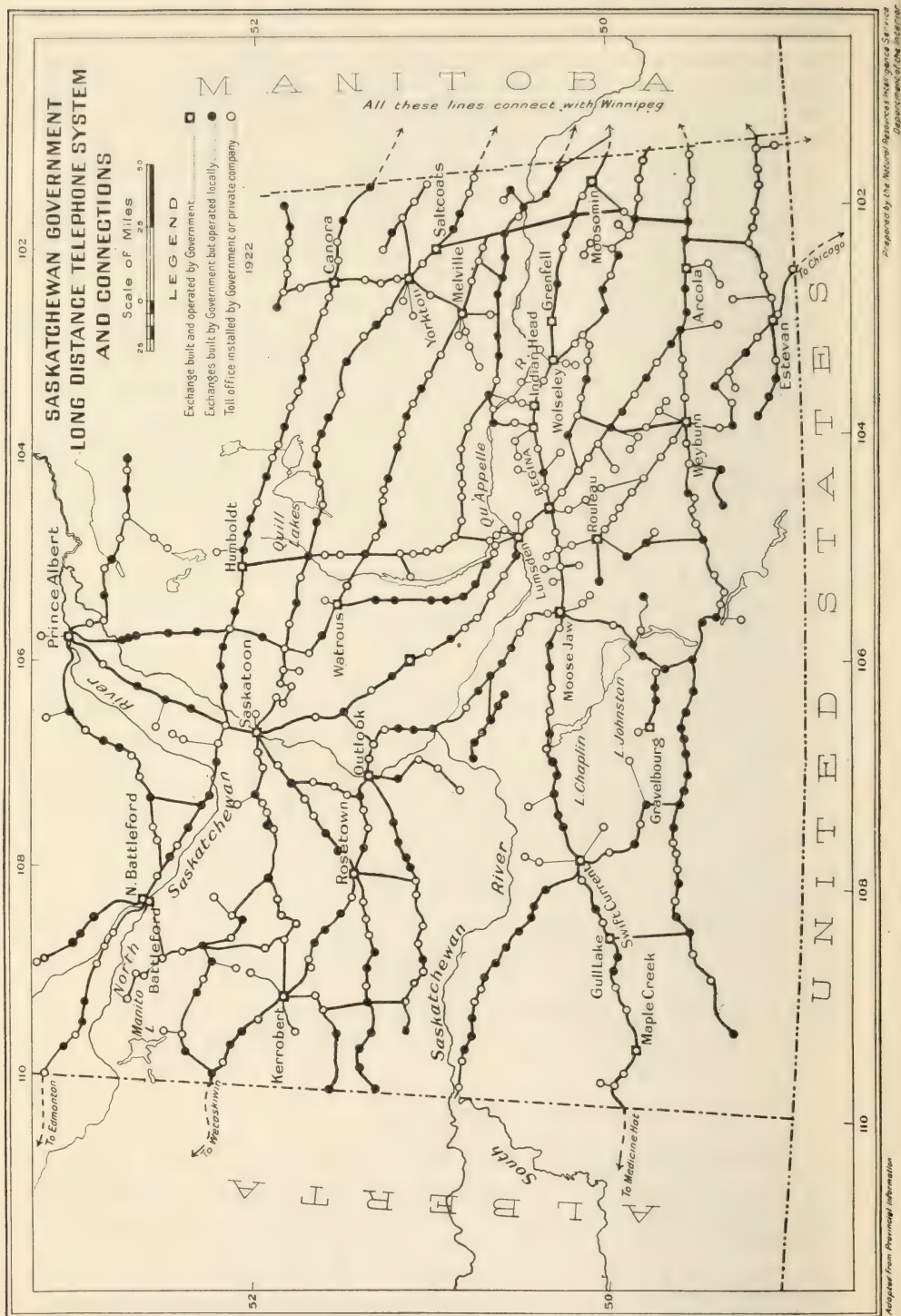
The main tributary of the Churchill above Frog portage is the Beaver river, a swift-flowing stream, heading near Lac la Biche, and flowing through a valley rich in timber and grazing lands. A short distance below the portage Reindeer river enters the Churchill, flowing southerly from the great lake whose name it bears.

The far northern waters of the province offer the adventurer an interesting route leading from Reindeer lake on the east to Athabaska lake on the west by way of Wollaston, Hatchet and Blake lakes, Black river and Fond du Lac. The Cree river enters Black lake from the south, while to the north a canoe route, broken by numerous portages, leads to the home of the Eskimo, in the great silent "barren lands." Though not of great commercial importance, these northern water routes offer unparalleled attractions to the lover of the great lone land who seeks an opportunity to enjoy an outing far from the nerve-racking worries of his every-day duties.

For a new province Saskatchewan is singularly fortunate in its many mediums of communications. Its six thousand miles of railways, its waterways and complete system of rural roads give opportunities for travel and intercourse far beyond those of most new districts. The Dominion Government maintains the mail service, which is kept up to a high standard. In territorial days a telegraph service had also been provided by the Dominion; this has been considerably extended. Telegraph lines also follow the railway lines. The Provincial Government has established a most thorough telephone system, which is rapidly growing and promises soon to be available for every rural home except the most outlying. Even the most remote settlers are within reach through the patrols of the police, forest fire rangers, or other officials. The regular physical features of the southern part of the province, its uniform surface of level, fertile land, and the evenly distributed settlement spreading over all, prevents the isolation of any section in the great agricultural areas. Its seven cities are widely separated and these, augmented by seventy-eight towns and over three hundred villages scattered over the province, give an urban centre with all its advantages within easy reach of rural quarters.

Telephones

The telephone situation in Saskatchewan is unique. It is controlled by a special department of the local government, under "The Railway and Telephone Department Act of Saskatchewan." A novel form of compromise is practised, by which the government owns and controls the long distance lines and controls and supervises all other lines. It is a combination of government and private ownership under the telephone department, the urban and long distance systems belonging to the government



owned class, and the rural systems to the privately owned class, with a very few exceptions. The legislation in this respect was introduced in 1908, and has been improved from time to time till now it is generally conceded that the province has the most satisfactory and complete grasp of the telephone situation exercised in Canada.

Starting with a nucleus of purchased companies, the government adopted a vigorous policy of extension and enlargement which has been carried out from year to year, resulting in a net-work of lines and offices which embraces the whole of the settled parts of the province, giving service to all the principal urban centres, and supplying connections to hundreds of rural systems. The steady increase of the population, both over additional area and in density on old areas, creates a steady demand for new lines and enlargements and improvements of existing ones. The growth of Saskatchewan's telephone system is shown by the following comparison between the statistics for 1910 and 1921.*

Year	Pole miles, long distance	Wire miles, long distance	Exchanges	Toll offices
1910.....	1,132	3,280	29	100
1921.....	5,842.27	31,104.44	283	432

*Annual Report, Dept. of Telephones, Saskatchewan, 1921.

The completed construction work for the year ending April 30, 1921, included:—

Number of new toll offices.....	23
Number of new exchanges.....	18
Long distance, pole miles.....	456.94
Long distance, wire miles.....	1,507.44

On December 31, 1920, there were in use in Saskatchewan 90,506 telephones, with 219,591 miles of wire, and 1,276 employees. The revenue above operating expenses was \$1,006,798.

The only points reached outside the province when the government took up the project were Manitoba and North Dakota. The system has now been extended to reach Western Ontario, Manitoba, Alberta, Montana, North Dakota, South Dakota, Minnesota, Wisconsin and Illinois. The telephone map on page 36 shows the extent of the government system. With points in Manitoba 300 messages per day were interchanged in the year ending 30th April, 1921, and with points in Alberta 52 messages per day. Within the province 6,650 messages passed per day. Altogether daily 14,000 people at varying distances apart reaching to hundreds of miles were brought into conversational contact. Practically every rural district within reasonable distance of a trade centre has now been covered.

The outstanding feature of Saskatchewan's way of dealing with the telephone question and wherein it differs from a straight government-owned venture, is the manner in which the rural telephones are handled. In a purely agricultural country, forging ahead with astounding strides, the providing of the country homes with telephone service becomes of vital importance. Saskatchewan has introduced a method, which is meeting with marked success, by which the government provides and owns a net-work of long distance lines and exchanges and permits the connection thereto of various local rural systems, organized, constructed and operated under government supervision.

Rural telephone companies may be organized by the farmers of the district to be served for their own benefit, and are not allowed to furnish service to residents of towns or villages. These companies are governed by the provisions of "The Rural Telephone Act," and are subject to the regulations of the Department of Telephones. The organization of a company must be in accordance with these provisions and regulations. Advice and assistance in these preliminary steps are provided by officials of the government, and when the organization meets with their approval a certificate of incorporation is issued.

The department requires that all rural lines be built to a standard in accordance with their specifications, and until they have been passed by an inspector of the department and accepted as satisfactory, connection with the government exchanges on long distance will not be granted. A metallic circuit is required and not more than ten instruments are allowed on one circuit. It has been found that those companies whose systems do not exceed four or five circuits obtain the most satisfactory results in maintenance, operation and service. A company is allowed connection with one town or market place only, and is required to provide for the future development of the district it purports to serve.

The advantages of this rural system are many. Communities bound together by peculiar ties of interest or location are permitted to obtain local systems under their own management. The supervision and assistance of the government guarantees a uniform service, highest efficiency and minimum cost. Classes of instruction on the maintenance of these lines are held every winter by the department free of charge, for the benefit of residents of each district having a rural system, and have been largely attended by farmers or their sons. Thus each district has a trouble-man in its midst and is enabled to effect repairs at a minimum of cost. This co-operative system between the various rural companies on one hand and the government on the other has proved most satisfactory, and is rapidly spreading to all farming sections of the province.

The following table compiled from the Report of the Telephone Department of April 30, 1921, shows the growth of the system to that date:—

I. GOVERNMENT SYSTEMS

Offices, toll only.....	155
Offices, exchange only.....	6
Offices, toll and exchange.....	277
Stations.....	30,570
Stations, rural (connected).....	42,627
Long distance lines, pole miles.....	5,842.27
Long distance lines, wire miles.....	31,104.44

II. RURAL SYSTEMS

Companies.....	1,172
Rural lines, pole miles.....	53,702
Rural lines, wire miles.....	174,531
Subscribers.....	58,265

III. OTHER SYSTEMS

Lines, pole miles.....	120
Stations.....	1,318
Total number of stations giving service in the province.....	91,123

Telegraphs

The telegraph facilities of the province are in keeping with the general advancement of its utilities. Generally speaking, it may be said that the railway situation represents that of the telegraph, the steel being followed by the wires everywhere. The Canadian Pacific Railway Company

own and operate their own telegraphs and every railway station is also a telegraph office. In case of flag stations or small stations where an operator is not employed connection by telephone is invariably available to the nearest operating point.

The Government system of telegraphs includes, besides the lines originally constructed by the Government, those previously owned by the Great North Western Telegraph Co., The Grand Trunk Pacific Telegraph Co., the Canadian Northern Railway Co., and the National Transcontinental Railway. The system is now operated by the Great North Western Telegraph Co., under the name Canadian National Telegraph Co.

The Canadian system of telegraphs, in proportion to population, is one of the most extensive in the world.

The following table shows the total mileage of telegraphs in Saskatchewan on December 31, 1922.

Companies	Pole mileage	Wire mileage
Canadian Pacific Railway Co.....	2,861	18,083
Canadian National Telegraph Co. (Great North Western Telegraph Co.) (Grand Trunk Pacific Rail- way Co.).....	3,421.2 924	13,655 1,028
Dominion Government telegraphs (Dept. of Public Works).....		
Total.....	7,206.2	32,766

The total number of telegraph offices in Saskatchewan is 590. The Dominion Government telegraph lines were built and are operated by the Federal Department of Public Works for the benefit of remote sections.

Postal Service

The postal service is administered by the Federal Government and is maintained in a high state of efficiency. Its expansion follows closely upon the opening up of all new districts. The number of post offices in Saskatchewan in operation on March 31, 1921, was 1,416. The cities of Regina, Saskatoon and Moose Jaw have postal deliveries and collections. Some 70 rural routes have been established, and mail is now being delivered to 2,100 rural boxes along these courses. A free daily mail service at the farmer's gateway is an advantage of primary importance. The only cost to the recipient is the price of the mail box. The approximate mileage of stage routes covered by His Majesty's mail couriers in Saskatchewan is 8,300 miles, and the approximate mileage of rural mail delivery routes is 2,049 miles.

EDUCATION AND RELIGION

Under the provisions of the British North America Act the Legislature of each province in Canada exercises exclusive control of educational matters within its own boundary. Saskatchewan has a department of education, of which the Honourable S. J. Latta is at present the active head, assisted by a deputy minister, a superintendent, an educational council, and a large staff of prominent educationists.



University of Saskatchewan, Saskatoon.—Students' Residence.

The educational system of the province is most thorough and comprehensive. It is headed by a provincial university, and from this distinguished seat of learning to the most humble rural public school, provisions for the dissemination of knowledge are most complete.

An Act establishing the University of Saskatchewan was passed on April 3, 1907. A site for the University was selected at Saskatoon, and the corner stone of the first building was laid by Sir Wilfrid Laurier on July 29, 1910. The University embraces:—

1. The College of Arts and Science, including Schools of Pharmacy and Accounting, offering,—

- (a) Courses in Arts and Science, leading to the B.A. and B.Sc. degrees.
- (b) Partial courses intended for those who cannot take a full course.
- (c) Courses in Pharmacy, one leading to the B.S.P. degree, and one to the license in pharmacy.

- (d) Course in Accounting leading to the degree of B.Acc.
- 2. The College of Agriculture, offering,—
 - (a) The course leading to B.S.A. degree.
 - (b) The associate course in agriculture.
 - (c) The extension work.
 - (d) The demonstration work on the College farm.
 - (e) Short courses for farmers.
- 3. The College of Law, offering,—
 - (a) The course leading to the L.L.B. degree.
- 4. The College of Engineering, offering,—
 - (a) The course in Civil Engineering leading to the B.E. degree.
- 5. The Summer School, offering,—
 - (a) Courses for teachers.
 - (b) Courses leading to a degree.

The University buildings command a prominent site overlooking the valley of the South Saskatchewan and the city of Saskatoon, and are built of stone which was obtained in the vicinity. The foundations of a library and museum have been laid with a valuable collection of some 16,000 scientific and historical volumes and museum specimens.

There are two Provincial Normal Schools, the first of which was established at Regina in 1893, and the second at Saskatoon in 1912. In 1920 there were 723 teachers in training. The Collegiate Institutes and High Schools were instituted under the Secondary Education Act of 1907. While a larger staff and better equipment is required for the Collegiates the course of study and the provincial examinations are the same for both. In 1920 there were twenty-four Collegiate Institutes and High Schools, with a staff of 198 teachers and 5,917 pupils. In the ordinary day schools in 1921, there were 89,993 pupils, and in the secondary schools the average daily attendance was 106,997. There were 6,809 teachers in the schools under public control, and the school districts increased in number to 4,344, with a total of 4,200 school houses. The very large proportional sum of \$14,609,665 was expended by the province on education in 1921. This amount included salaries, the erection of new school buildings, and all other expenses. Nearly \$6,000,000 was expended on salaries. On December 31, 1920, there was a total of 4,177 schools, publicly controlled, both elementary and secondary, with a total of 174,925 pupils enrolled.

The University of Saskatchewan has a teaching staff of eighty, and in 1920-21 the students enrolled numbered 1,136.

The Saskatchewan Act, passed by the Parliament of Canada in 1905 to create the province, provides for the organization of separate school districts for Protestants or Roman Catholics. This provision contained a privilege that had been in force from the earliest territorial days. There are at present 20 separate school districts, 16 of which are Roman Catholic and the remainder Protestant.

The Superintendent of Education exercises the general supervision and direction of high schools and collegiate institutes, model schools, public and separate schools, training schools for teachers, the granting of teachers' certificates, technical schools, departmental examinations, teachers' institutes, teachers' reading courses, school libraries and the inspectors of any such schools. The Educational Council, consisting of five members

appointed by the Lieutenant-Governor, holds sessions at least once a year, and all general regulations respecting the inspection of schools, the examination, training, licensing and grading of teachers' courses of study, teachers' institutes, and text and reference books, before being adopted or amended, are referred to the Council for consideration and report.



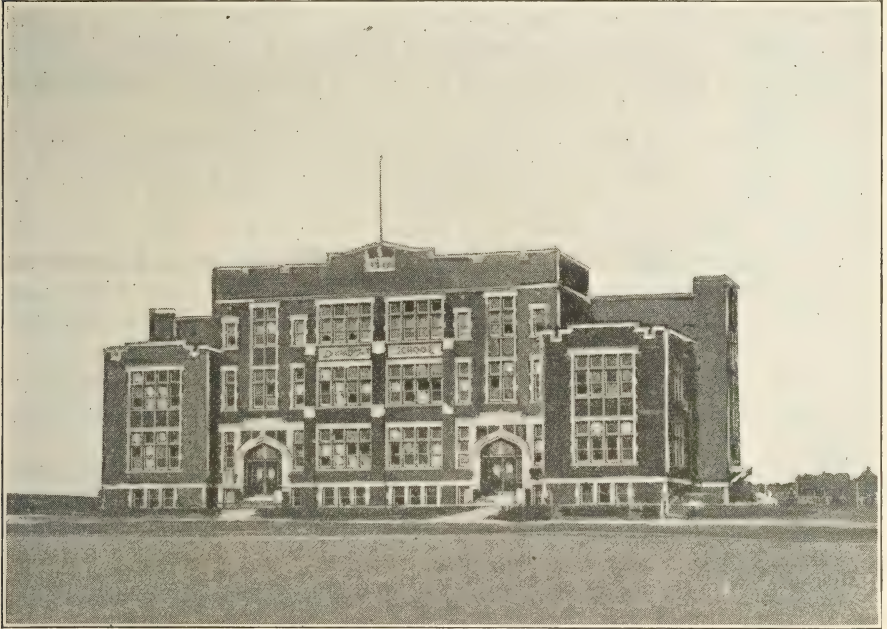
Public School. Saskatoon.

Elementary Schools are supported partly by taxes levied by the municipalities concerned, and partly by grants paid to the Government in accordance with the School Grants Act. Funds for high schools are raised by the municipalities concerned and are assisted by the government grants payable on the conditions prescribed by the Secondary Education Act. As a further source of revenue to both public and high schools, grants are paid from the supplementary revenue fund in accordance with the provisions of the Supplementary Revenue Act.

The School Act provides for the establishment of schools wherever necessary, and any portion of the province with an area not exceeding twenty square miles may be organized into a school district, provided there are residing therein ten children of school age, and four persons, each of whom, on its organization, is liable to be assessed for school purposes. These schools are under the control of local bodies of trustees chosen on a popular vote. The appointment of teachers is in the hands of the trustees, but the Education Department issues the certificates of qualification.

Provision was made in 1913 for the establishment of consolidated districts, containing from thirty-six to fifty square miles, for the purpose

of providing transportation of pupils to a central school. There are now some twenty-eight consolidated schools in operation. In addition to the usual school grant, the Government pays one-third of the actual cost of conveyance. In case a small district is unable to raise sufficient taxes by reason of its limited area to operate a school, or has insufficient school population, the resident children may be conveyed to a neighbouring school at the expense of the district. In this case also the Government pays one-third of the cost of conveyance.



Connaught School, North Battleford, Sask.

Where an unorganized area is settled by families with children of school age, the Minister may order the establishment of such area into a school district. This action is necessary only in foreign-speaking settlements, where the settlers are not sufficiently acquainted with the English language to conduct organization proceedings.

The two normal schools, located at Regina and Saskatoon, are devoted to the provisional training of teachers. In addition, local sessions of the normal school, for the training of teachers for elementary schools, are held during the winter months at several points in the province and are conducted by the inspectors of schools. Normal school training is considered of supreme importance, and permanent certificates are issued only to those who have received professional training in the training schools of the province or upon satisfactory evidence of equivalent training elsewhere. A reading course for teachers is regarded as part of the professional training, and permanent certificates are not issued until the regulations governing the course are complied with.

The education of the Indian population is principally in the hands of the Church of England and the Roman Catholic Church, being combined with their missionary activities. Other churches have also contributed to some extent in this work but the two mentioned have for many years

carried on a campaign of religious and educational activity among the red men of the west. The schools on Indian reserves are assisted financially by the Department of Indian Affairs at Ottawa, which also provides the reserves with agents and instructors to teach and assist the natives in bettering their own conditions by such industries as farming and stock raising. On nearly all the principal reserves are found such religious and industrial institutions. In the far north the Roman Catholic church has a most complete establishment at Lac la Plonge, consisting of church, school, hospital and residence buildings, a modern saw mill and an up-to-date farm. A large church and school are also located at Ile à la Crosse, with various smaller churches scattered throughout the adjacent districts where visiting officials hold session of two or three weeks duration from time to time.

The Church of England maintains a similar institution on Lac la Ronge. A very picturesque and striking edifice is the English Church at Stanley. Built on a rocky point projecting out from the north bank of the Churchill river, it commands a sweeping view of this water, while the rocky pine-covered hills behind form a pleasing background to its tall lone steeple. The windows consist entirely of stained glass, every pane of which was imported from England and transported with considerable difficulty over the tedious canoe route from York Factory. The interior woodwork, pews and fittings were also imported, while the outer boards and shingles were sawn by hand from native timber by the Indians themselves.

The Indian industrial school at Duck Lake is a most thorough institution, and native children from considerable distances attend. Both Anglican and Roman Catholic missions are found on the Onion lake reserve, and a well equipped government agency.

Religion

Freedom of worship and a cosmopolitan population have enabled the various religious denominations to be widely represented in Saskatchewan. According to the Dominion census of 1921 the following denominations are in evidence:—

Religion	No.
Presbyterians.....	162,165
Roman Catholics.....	147,292
Anglicans.....	116,224
Methodists.....	100,851
Lutherans.....	91,988
Greek Church.....	47,171
Baptists.....	23,696
Mennonites.....	20,544
Miscellaneous*.....	15,700
Protestants.....	3,250
Doukhobors.....	7,176
No religion.....	2,610
Jews.....	5,328
Christians.....	2,030
Congregationalists.....	2,555
Adventists.....	2,893
Pagans.....	1,556
Evangelicals.....	1,489
Mormons.....	1,440
Salvation Army.....	1,552
Total.....	757,510

*Miscellaneous includes all religions less than 1,000.

The executive divisions of the Presbyterians and Methodist churches make of the province in each case an individual field, namely the Synod of Saskatchewan and the Conference of Saskatchewan respectively. The Anglican churches of the province are included in the ecclesiastical province of Rupert's Land and the Roman Catholic churches in the Archdiocese of Regina.

In the principal cities and towns of the province some very fine edifices are to be seen, while throughout the rural districts the number and excellence of the church buildings is a pleasant surprise to the traveller.

CLIMATE

The climate of Saskatchewan is recognized as one of the province's assets. Not only is it healthful and invigorating, but its conditions are such as tend to stimulate the agricultural possibilities of the land, especially in respect to wheat growing. Before settlement had been made in the West, the common impression prevailed that the climate was too severe for agricultural activities. The early explorers carried back to Europe most harrowing tales of the severity of the climate of the St. Lawrence valley. The region including the present cities of Montreal and Quebec was pictured in Arctic phrases, and for long years the future of Canada was prophesied to be exceedingly uninviting because of her severe climate. Manitoba was at first condemned as unsuitable for the growing of grain of any description. To-day her wheat belt is steadily enlarging. Saskatchewan has undergone a somewhat similar experience.

The winters indeed are cold but decidedly healthful. Short spells of extra severity, and a few blizzards occur. Under foot the ground is frozen hard and dry and the lakes and streams are covered with a safe sheeting of ice. The snow is dry and powdery and the fall is exceedingly light. The air is clear and crisp,—the sky usually free from clouds. By day the sunshine spreads a brilliant glow over the sky and land, and though its heat is small, it dispels all dampness from the atmosphere, making the air exceedingly dry and light.

This clear, dry cold is not the cold of a damp, dull, seaside winter, with its slush and mud underfoot, or its deep snow, heavy atmosphere and lowering sky. At twenty-five degrees below zero children romp and play out of doors entirely unconscious of the cold. Men will tell you that at forty-five below they experience less difficulty in keeping warm than at zero in other countries. Dry, clear cold is peculiar to the western provinces and a source of wonder and delightful surprise to the new-comers. As to the short spells of excessive cold which must be expected, or occasional blizzards, due provision should be made to cope with them if it is found necessary to be out of doors, and to keep the home well warmed within.

The summers are characterized by high day temperatures and an abundance of sunshine. The heat is not oppressive; the dryness of the air is most marked and the nights are cool. Sultry, murky days are almost unknown. The northern latitudes and expansive prairies give a long period of daylight. In fact the nights during the summer months are merely short periods of twilight. The skies appear high and the air exceedingly bright.

Temperature

The mean temperature of the province for the year is 36 degrees Fahrenheit. During the growing season it is about 55 degrees. The mean annual precipitation is only about 16.75 inches. This is nearly all in rain, however, the snowfall being very light. It also occurs mainly during

the growing months of May, June and July, when it is most needed by the crops. As a rule it proves sufficient for their needs when careful methods of farming are followed. It is, however, too low for sure crop production, with average careless methods of soil cultivation; hence dry farming methods are found to be necessary in order to secure the best results. A certain amount of hail is precipitated annually in varying districts. Some sections appear to be more susceptible than others. The percentage of damage it does to growing crops, taking the province as a whole, is small, though often very severe locally. For this reason, the provincial hail insurance scheme is in operation. Severe wind and electric storms are very rare. Only one hurricane of any account has ever visited the province, and its scope was limited to a small area.



Sheep Grazing in Saskatchewan.

Temperatures throughout the province differ but little from the mean at any given time and rise or fall with fairly uniform variations. Lower temperatures in the more northerly latitudes are offset to a certain extent by the shelter derived from the woods and modifying effects of large bodies of water. The uniform altitude of the prairies bears an important relation in this respect. The altitude of the second prairie steppe, which comprises the greater part of the province, is 1,600 feet on an average. That of the third prairie steppe, embracing the westerly part of the province and extending to the Rocky mountains, is about 3,000 feet.

A very noticeable feature of the climate is the rapidity with which winter gives way to spring or even summer weather—a sudden rising of the temperature, with bright sun and soft breezes, and in an incredibly short time the light mantle of snow has disappeared. Without waiting for the frost “to come out of the ground,” the waters from the melted snow

disappear, the ground surface dries up as fast as it thaws out, and in a few days the dust is flying. Seeding operations soon follow, and the transition has taken place usually without the proverbial "March winds and April showers" and all their discomforts. As a rule, the snow disappears during March or very early in April. Seeding operations usually commence about the first week of April. During the past ten years the average date of the commencement of seeding operations has been April 10 and the average date at which seeding operations were general has been April 20. Harvest begins early in August and is usually well under way by the middle of that month. Early frosts and autumn weather may be looked for in September. The most pleasant months of the year, however, are usually September and October. Wintry weather is due any time after the first of November, though open autumns till the first of December are not uncommon. Thus it will be seen that the summers on the prairie are unusually long and the winters, though cold, are shorter and brighter than those of eastern districts with more moderate temperatures.

The relation between climate and human energy is now well recognized. The climate of a country is known to be a controlling factor in the industrial activity and the intellectual status of its people, and the climate of Saskatchewan, especially in the southern half of the province, is rated as favourable for the successful expansion of national life and progress.

The following comparative statement, prepared by the Provincial Secretary of Statistics, shows the dates of wheat operations from 1915 to 1920:—

Year	Seeding		Cutting		Threshing general
	Com- menced	General	Com- menced	General	
1920.....	May 1	May 6	Aug. 26	Sept. 10	Sept. 15
1919.....	April 17	April 24	July 28	Aug. 18	Sept. 2
1918.....	April 7	April 15	Aug. 15	Sept. 7	Sept. 15
1917.....	April 27	May 5	Aug. 18	Sept. 7	Sept. 14
1916.....	April 15	April 15	Aug. 15	Sept. 11	Aug. 22
1915.....	April 4	April 10	Aug. 19	Sept. 7	Aug. 19

The following table shows the highest, lowest, and mean temperatures at representative places during the year 1921. The temperatures are in degrees Fahrenheit and the precipitation is shown in inches (one inch of rain is considered the equivalent of ten inches of snow). The meteorological records of the past 50 years would seem to indicate that the winter climate of the west is becoming milder. The variations from the average are largest in the western provinces, gradually diminishing towards the Atlantic coast.

*TEMPERATURE AND PRECIPITATION, 1921

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>Battleford</i> Highest.....	37	50	47	60	81	86	94	93	78	78	55	45
Lowest.....	-25	-35	-24	5	30	31	46	40	31	23	-15	-32
Elevation 1592 Mean.....	8	12	15	35	52	66	66	63	51	45	17	10
Precipitation..	0.80	1.44	0.64	3.35	2.36	1.70	2.89	1.02	3.89	0.35	0.84	0.20
Days of hail..	0	0	0	0	0	0	0	0	0	0	0	0
<i>Kamsack</i> Highest.....	34	34	40	65	78	90	91	84	82	71	45	37
1,445 feet Lowest.....	-34	-43	-28	5	26	27	40	32	29	24	-32	-57
Mean.....	5	3	9	33	54	65	66	59	51	42	13	-1
Precipitation..	1.17	1.81	0.72	1.62	2.65	7.36	10.10	4.75	3.93	0.80	1.25	0.45
Hail.....	0	0	0	1	0	0	0	0	0	0	0	0
<i>Prince Albert</i> Highest.....	30	46	45	59	80	86	86	86	74	76	52	42
1,450 feet Lowest.....	-36	-36	-34	4	27	30	46	36	32	24	-22	-36
Mean.....	5	11	11	34	52	65	65	61	51	43	14	9
Precipitation..	1.08	1.78	2.71	3.13	3.50	3.03	3.20	1.34	3.00	0.30	1.90	0.40
Hail.....	0	0	0	0	0	0	0	0	0	0	0	0
<i>Regina</i> Highest.....	36	47	55	70	80	94	95	96	80	70	58	42
1,896 feet Lowest.....	-25	-25	-14	6	15	29	41	34	27	19	-23	-26
Mean.....	10	14	21	37	53	66	68	63	52	43	18	12
Precipitation..	0.13	0.36	0.25	1.35	2.12	3.30	4.81	1.56	4.19	1.64	0.54	0.48
Hail.....	0	0	0	2	0	0	0	0	0	0	0	0
<i>Saskatoon</i> Highest.....	39	47	45	64	81	88	95	95	80	71	56	39
1,690 feet Lowest.....	-22	-30	-25	5	26	30	47	37	30	23	-18	-37
Mean.....	7	9	13	34	51	65	65	62	51	43	16	7
Precipitation..	0.48	0.93	2.23	2.05	2.05	4.11	3.40	0.26	2.98	0.36	1.52	0.45
Hail.....	0	0	0	0	0	0	2	0	0	0	0	0
<i>Swift Current</i> Highest.....	49	56	57	69	82	95	99	98	85	80	66	50
2,392 feet Lowest.....	-15	-17	-18	10	24	34	43	41	28	24	-20	-24
Mean.....	18	20	24	38	53	67	67	66	51	48	22	18
Precipitation..	0.13	0.08	0.56	0.67	2.13	2.04	2.46	1.22	4.24	0.78	0.43	0.19
Hail.....	0	0	0	0	0	1	3	0	0	1	0	0

*Compiled from information furnished by the Meteorological Service of Canada.

SOIL

Scientific investigations of the soils of Saskatchewan have been practically confined to those of the prairie, but as the prairies comprise almost the entire agricultural area of the province a very comprehensive knowledge of the subject has been acquired. In general terms it may be said that the over-burden of soil is most generous and its quality amazingly fertile. Added to this is the wonderful percentage of arable land within the limits of such area,—very trivial parts being covered by water and nothing wasted by mountains—which gives one of the most extensive yet compact wheat-growing districts of the world. The soil of the prairies has been found to be peculiarly adapted to the growing of wheat.

The agricultural belt of Saskatchewan might be said to be, roughly, limited on the north by the 54th parallel of latitude. Beyond this there is considerable good land, but it occurs in more or less irregular areas, owing to the outcropping of rock and the numerous lakes and rivers. Evidence of the fertility of the soil in such areas is seen in the luxuriant gardens about the trading posts and missions of these northern parts.

The prairies may be said to extend approximately northerly to the Saskatchewan river. In the western part of the province, however, they reach slightly beyond, practically to an imaginary line drawn from Fort Pitt to Prince Albert. The Saskatchewan river might then be considered as a rough limit as far easterly as Fort à la Corne. In the eastern part of the province the wooded areas encroach south of the river to an irregular line extending from Fort à la Corne to Fort Pelly.

North of the boundary indicated irregular areas of prairie and light woods are found. The soil is on a par with that of the prairies farther south. Its notable feature is the luxuriant growth of hay and grass, which makes these sections very attractive fields for ranching purposes. Ridges of sand are found in certain areas which appear too barren for either farming or grazing. On these forests of jackpine will grow, and nearly all such areas have now been made into forest reserves, so that they may not be allowed to become useless wastes. In the spruce forests there is considerable muskeg. On being cleared up and drained these muskegs make excellent soil, resembling black vegetable mould, which produces very heavy growths of grains and grasses. As far north as climatic conditions will permit plant life grows profusely where its roots can obtain a foothold in soil, however scanty it may be. The fertility of these northern soils is most remarkable.

In certain small areas of the southern part of the province discouraging results were obtained in attempting to secure crops. Investigation showed that the top soil had been burned off by disastrous fires in dry seasons. However, the percentage of poor or barren soils in the agricultural section of the province is practically nil, while the general value is exceptionally high.

Careful studies of the soils of Western Canada have been conducted by Dr. F. T. Shutt, Dominion Chemist, during the past twenty-five years, and his conclusions regarding the fertility and productiveness of the soils of Saskatchewan's prairies are most encouraging. His reports and find-

ings are embodied in a pamphlet entitled *Western Prairie Soils*. It is from this source that most of the information here given in connection with the subject of soils is extracted.

Prairie Soils

The outstanding characteristic of the western prairie soils is their large proportion of vegetable matter and its concomitant nitrogen. It is to this fact they primarily owe their remarkable fertility and lasting quality. For the most part they contain abundant stores of the mineral elements of plant food, though in this respect they do not differ from many soils of less productiveness found in other parts of the Dominion. It is the large percentage of nitrogen-holding, humus-forming material, and its intimate incorporation with the sand and clay, that give to these soils their superiority, chemically, physically and biologically.

Soils of great productiveness are characterized by large percentages of organic matter and nitrogen, while worn or partially exhausted soils, resulting from continuous grain growing or other irrational treatment, and soils from naturally poor areas, show meagre amounts of these constituents. As far as soils in humid and semi-humid districts are concerned, there exists a relationship between the organic matter and the nitrogen such that methods of culture which increase the amount of the former raise the percentage of the latter. On the other hand when the organic matter is destroyed, nitrogen is dissipated.

In humus is found nature's storehouse for nitrogen that may be readily nitrified and made available for crop use. Upon further decay of the humus valuable percentages of potash, phosphoric acid and lime are liberated, so that a large part of the soil food supply of the growing crops is no doubt obtained from the humus. Of equal importance with its chemical value is its influence on the physical condition of the soil. This is most important in increasing the capacity of the soil for holding moisture. Investigations have shown that soils of the same type from adjoining areas, apparently under the same climatic conditions and with equal drainage, will retain moisture in proportion to their organic matter content. The prairie soils, during the growing season, may retain amounts of water far in excess of those present in soils less rich in organic matter though favoured with a heavier precipitation. The high absorptive capacity of these soils under suitable cultural methods allows moisture to be held over from one season to another. Thus it is possible, in districts of scanty precipitation, to secure by means of a fallow, two good crops in three years, when only meagre yields would be obtained if the land were seeded every year. Humus also contains properties which favourably modify the tillage and temperature of both clays and sands.

The growth of crops depends largely upon the rate of nitrification during their vegetative period, and, while temperature and moisture largely control this process, the amount of nitrates formed must be materially affected by the quantity of the food supply the micro-organisms find in the form of partially decomposed organic matter. Of all the elements of plant food, nitrogen is the most potent in its influence on crop production. As regards prairie soils, nitrogen may be considered as the chief index of their fertility, or the most reliable measure of their crop-producing power. This applies to both clay and sandy loams. The extraordinary growth

that characterizes vegetation on the prairie, as soon as the season opens, is due, for the most part, to the fact that very rapid nitrification takes place in the spring and early summer months, consequent upon the large water content of the soil and the high temperatures which then prevail.

The richness of these prairie soils is due to the tremendous accumulation of nitrogenous organic matter with its associated mineral constituents, the remains of countless generations of plant life. Since the glacial period the prairies have been continuously covered with grasses and leguminous herbage. As layer upon layer of decaying forests are pressed down by succeeding growths to form beds of coal for man's use in future ages, so these growths of grasses and herbs have formed a soil of remarkable depth and wonderful fertility.

This heritage of wealth is now being reaped in the form of bountiful crops. In order that it may be made a lasting resource it will be necessary to practise rational methods of farming.

Other reasons for the remarkable fertility of the soil are the favourable climatic condition of the prairies and their regular physical features. High diurnal temperatures, long days, and a sufficient rainfall during the growing season are conducive to a most luxuriant growth. Rapid nitrification and conversion of inert mineral matter into available plant food take place practically throughout the summer. The winter season, with its dry cold, then practically locks up the stores of plant food from the autumn until the season opens again. Waste from leaching, which occurs where there is an excess of rain to carry off the soluble constituents, or where the winter is mild and open, is thus prevented. The generally level character of the prairies also has precluded those losses of soil by erosion which naturally occur in more or less mountainous districts.

Alkali Soils

These soils occur only in very limited areas in the province of Saskatchewan. Their extent has been greatly exaggerated as well as their injurious properties. Fortunately, they do not constitute any serious drawback to the development of the province; but, as the term "alkali" is met with so frequently on the western prairies, the following notes by the Dominion chemist, in a pamphlet entitled *Alkali Soils*, may be of interest.

"Alkali soils occur in arid or semi-arid districts only, and these in Canada may be said to be restricted to certain areas in British Columbia, southwestern Alberta and in a limited degree Saskatchewan and Manitoba.

"Two classes of alkali are generally recognized, 'white' and 'black.' White alkali consists, chiefly, of the sulphate and chloride of sodium (Glauber's salt and common salt). Black alkali is characterized by the presence of sodium carbonate (washing soda), which, through its solvent action on decayed vegetable matter, gives a black incrustation to the soil. Soils impregnated with alkali are injurious to vegetation, but the greater number of alkali soils when freed from excess of alkali are exceedingly fertile. Black alkali is more injurious than white alkali. Alkali soils can be reclaimed by thoroughly washing out and carrying away the alkali. If the natural drainage of the soil is not good, flooding by irri-

gation should be preceded by the construction of an adequate system of under-drainage. The black alkali in soils can be converted by the application of land plaster (ground gypsum) into white alkali, which, as already stated, is a milder form as regards vegetable life. In this way large tracts of useless soil in the United States have been effectively and cheaply reclaimed. If the black alkali is only present in small amounts the land may be rendered cultivable simply by a dressing of land plaster, but in most cases it will be necessary to wash away the resulting white alkali before the soil is fit for bearing crops."

Soil Surveys

Soil surveys are now being systematically prosecuted in Saskatchewan by the Provincial Government and the Topographical Surveys Branch of the Federal Department of the Interior. Provincial officials are paying particular attention to the soils of patented lands, while the Topographical Surveys Branches are examining the soils of unsettled or partly settled areas. Chemical analyses of soil samples are made in co-operation with the University of Saskatchewan at Saskatoon.

This work is augmented by land classification surveys conducted by the Topographical Surveys field men. The results of their investigations are of great value in deciding land settlement problems and in determining proper methods in farm operations. The information is available to the public, being published in map form, in which a colour system is used to represent condition.

AGRICULTURE

Wheat has become to Saskatchewan a symbol of prosperity. The golden grain of her prairies is famous the world over and her marvellous yields of "No. 1 Hard" have placed her in a position of pre-eminence among the wheat-producing provinces and states of North America. In 1921 her wheat crop exceeded in value by \$18,000,000 the total output of gold from the Klondike during the whole of its history. The wheat production for 1921 exceeded the combined wheat production of Manitoba and Alberta by \$66,585,000. Its average for several years has been well over the hundred million bushel mark, while in 1922 it reached well beyond two hundred and fifty millions. This crop is composed entirely of the famous hard spring wheat, which makes the finest of flour so eagerly sought by all classes. The entire area sown to wheat as yet has not exceeded one-sixth of the available area judged suitable for grain-growing, so that the outlook for still greater yields is indeed encouraging. In fact, one hardly dare prophesy what the future may be expected to reveal, so marvellous has been the expansion in the last few years.

Spreading westward from the famous Red River valley of Manitoba, where the first colonists of the prairies broke the virgin soil, a great army of wheat growers invaded Saskatchewan along the fertile banks of the Souris, Qu'Appelle and Assiniboine rivers. The riches of the Saskatchewan valley lured their ever increasing ranks more northerly and the path of their progress might be fairly well indicated by a line starting at the international boundary, at the south-east corner of the province, and extending in a north-westerly direction to the point where the Saskatchewan river crosses its western boundary. As the crow flies this distance is nearly 500 miles, and the heart of the belt is 200 miles in width. Within this area are included such famous wheat centres as Arcola, Estevan, Weyburn, Moosomin, Indian Head, Qu'Appelle, Regina, Moose Jaw, Saskatoon, Rosthern, Battleford and Lloydminster—names that always suggest visions of expansive harvest operations. Spreading out from this main belt the grain fields have reached to all but the more northerly parts of the province, and wheat has been supplemented by oats, barley and flax, according to the demands for these grains or their better adaption to growing conditions. The total yield of grain in the province in 1922 was 468,629,000 bushels, an increase of 71 per cent in two years.

It must not be supposed, however, that farming in Saskatchewan is by any means limited to grain-growing. Since the Provincial Government came into existence in 1905 it has been most active, through its Department of Agriculture, in providing for a rational and complete system of farming, that would guarantee the permanency of the industry and provide for its continued prosperity. In too many instances the richness of the soil has been the undoing of a new country. Lands have been mined, not farmed, and in a few years a depleted soil ensued. To guard against such disaster has been the constant effort of the department, and the success achieved is strikingly evident in the improved methods of farming everywhere seen, particularly the tendency towards "mixed farming," and the remarkable yields in dairy products, wool, poultry and eggs, live stock, vegetables and kindred lines now found in all sections.

Lands and Products

The Crown lands of the province are the property of the Dominion, and are administered by the Department of the Interior at Ottawa. When such lands are alienated, however, either by sale, grant, homestead or otherwise, and patent issued therefor, further control passes automatically to the province. Free homesteads of 160 acres each are still available in the northern parts of the agricultural belt. The choice prairie homesteads



Prelude Wheat at Indian Head, Sask.

have been practically all taken up, and this class of land is now obtained by purchase. There is considerable lightly wooded land of excellent quality still available, however, for the homesteader who is willing to undertake clearing it.

The following statement shows the disposition made by the Federal government of lands in the province surveyed up to January 1, 1923:

DETAILED STATEMENT OF SURVEYED AREA JANUARY 1, 1923

Lands	Acres
Area under homestead (including military homesteads).....	27,616,100
Area under Pre-emption and Purchased Homesteads (1st Sept., 1908, to 20th Mar., 1918) half-breed scrip, sales, special grants, etc.....	7,663,300
Area granted to railway companies.....	15,177,063
Area granted to Hudson's Bay Company.....	3,183,000
Area of school land endowment (1-18 of area surveyed in sections).....	3,942,000
Area sold under irrigation system, and subject to reclamation by drainage.....	77,099
*Area under timber berths.....	740,900
*Area under grazing leases.....	2,898,700
*Area of forest reserves and parks.....	5,964,300
*Area reserved for forestry purposes (inside surveyed tract).....	1,430,000
*Area of road allowance.....	1,467,500
Area of parish and river lots.....	84,010
Area of Indian reserves.....	1,071,136
Area of Indian reserves surrendered.....	410,365
*Area of water-covered lands (inside surveyed tract).....	1,911,200
Area now available for entry.....	5,390,700
Total surveyed area.....	79,027,973

*Area not available for cultivation.

From this table it will be seen that 5,390,700 acres of surveyed land were available for homestead entry in January of 1923.

In the following table is shown a classification of the estimated farm land of the province.

SASKATCHEWAN FARM LAND CLASSIFICATION, 1923
FARM LANDS OCCUPIED (ACRES)

I. Improved—		
(1) Under wheat.....	12,332,297	
(2) Under oats.....	5,098,104	
(3) Under barley.....	636,456	
(4) Under flax.....	466,177	
(5) Other crops.....	1,300,133	
(6) Grazing, estimated.....	12,771,000	
(7) Summer-fallow, estimated.....	3,751,000	36,355,167
II. Unimproved—		
Forest, prairie, marsh and waste, estimated.....		6,422,833
Total farm land occupied, estimated.....	42,778,000	
Total farm land unoccupied, estimated.....	27,222,000	
Total area of province estimated available for crop production.....		70,000,000

From these figures it is seen that about 61 per cent of the total area of the province estimated as available for agricultural purposes is now occupied, and of such occupied portion about 85 per cent is improved. About 52 per cent of the estimated agricultural land is improved. In



Harvesting with Twelve Binders, Wilkie, Sask.

general, therefore, it may be said that the province as yet has reached only one-half of its agricultural potentiality. Inferior lands included in the estimated unimproved acreage, and which cannot be considered productive, will be offset by the greater rate of production under intensive methods applied to improved acreage.

The following table shows the acreage, yield, and value of wheat, oats, barley, and flax grown in Saskatchewan from 1917 to 1922 (compiled by the Dominion Bureau of Statistics, January, 1923).

Crop	Year	Area	Yield per acre	Total yield	Total value
		acres	bushels		\$
<i>All Wheat</i>	1917	8,273,250	14.25	117,921,300	299,966,900
	1918	9,249,260	10.00	92,492,600	184,061,000
	1919	10,587,363	8.50	89,994,000	208,787,000
	1920	10,061,069	11.25	113,135,300	175,360,000
	1921	13,556,708	13.75	188,000,000	142,880,000
	1922	12,332,297	20.25	250,167,000	212,642,000
<i>Oats</i>	1917	4,521,600	27.25	123,213,000	76,392,400
	1918	4,988,499	21.50	107,253,000	75,077,000
	1919	4,837,747	23.10	112,157,000	78,510,000
	1920	5,106,822	27.70	141,549,000	58,035,000
	1921	5,681,522	30.00	170,513,000	40,372,000
	1922	5,098,104	35.25	179,708,000	52,115,000
<i>Barley</i>	1917	669,900	21.00	14,067,900	14,067,000
	1918	699,296	17.00	11,888,000	10,461,000
	1919	492,586	18.20	8,971,000	9,689,000
	1920	519,014	20.25	10,510,500	6,931,000
	1921	497,730	26.75	13,343,000	4,858,000
	1922	636,456	29.00	18,511,000	6,971,600
<i>Flaxseed</i>	1917	753,700	6.25	4,710,600	12,247,600
	1918	840,957	5.00	4,205,000	13,036,000
	1919	929,945	4.80	4,490,000	18,589,000
	1920	1,140,921	5.00	5,705,000	10,383,000
	1921	426,849	7.50	3,230,000	4,443,000
	1922	466,177	8.75	4,079,000	6,975,000

The amount of land sown to wheat, oats, barley, and flax, and the yields of these cereals during the years 1910 to 1922, is illustrated in chart form.

The tables immediately following demonstrate the favourable position the province occupies in respect to the production of such cereals when compared with various states of the adjoining republic.

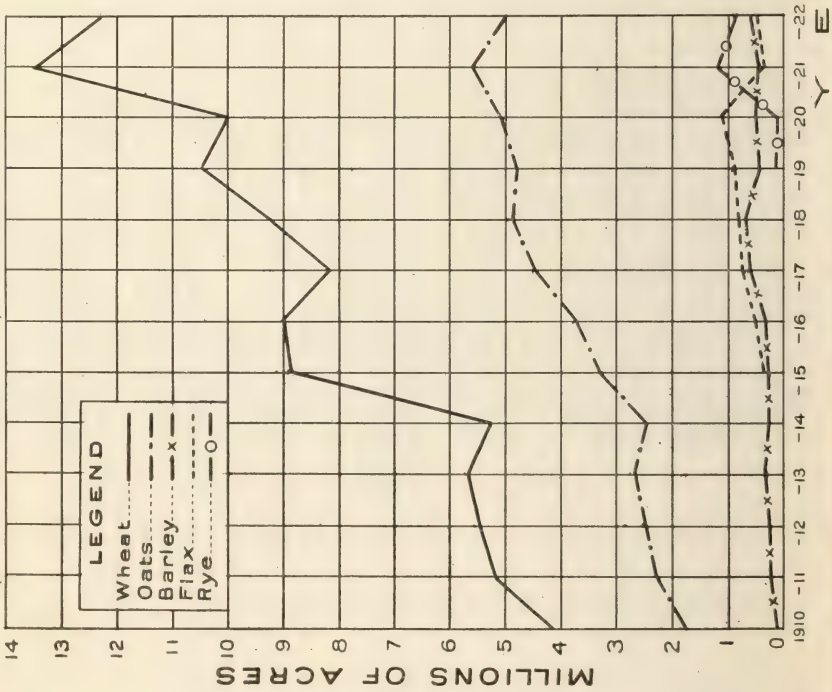
STATEMENT OF SASKATCHEWAN'S WHEAT PRODUCTION COMPARED WITH THAT OF EACH OF THE TWELVE STATES OF THE UNION PRODUCING THE LARGEST QUANTITY OF THIS GRAIN DURING THE YEAR*

Province or state	Winter or spring wheat	1920	1919	1918
Saskatchewan.....	Spring	113,135,274	89,993,685	92,493,000
Minnesota.....	Winter and spring	29,116,000	36,315,000	75,792,000
North Dakota.....	Spring	68,400,000	55,200,000	105,672,000
South Dakota.....	Winter and spring	26,282,000	30,175,000	62,160,000
Kansas.....	Winter and spring	137,056,000	152,079,000	102,008,000
Ohio.....	Winter	28,698,000	53,932,000	42,547,000
Oklahoma.....	Winter	46,240,000	54,040,000	32,899,000
Indiana.....	Winter	23,540,000	42,332,000	49,427,000
Illinois.....	Winter	40,670,000	64,562,000	63,970,000
Washington.....	Winter and spring	37,982,000	39,305,000	29,187,000
Missouri.....	Winter	32,721,000	59,833,000	53,154,000
Pennsylvania.....	Winter	25,284,000	29,055,000	25,551,000
Montana.....	Winter and spring	19,850,000	10,650,000	29,961,000
Nebraska.....	Winter and spring	60,480,000	60,675,000	41,213,000

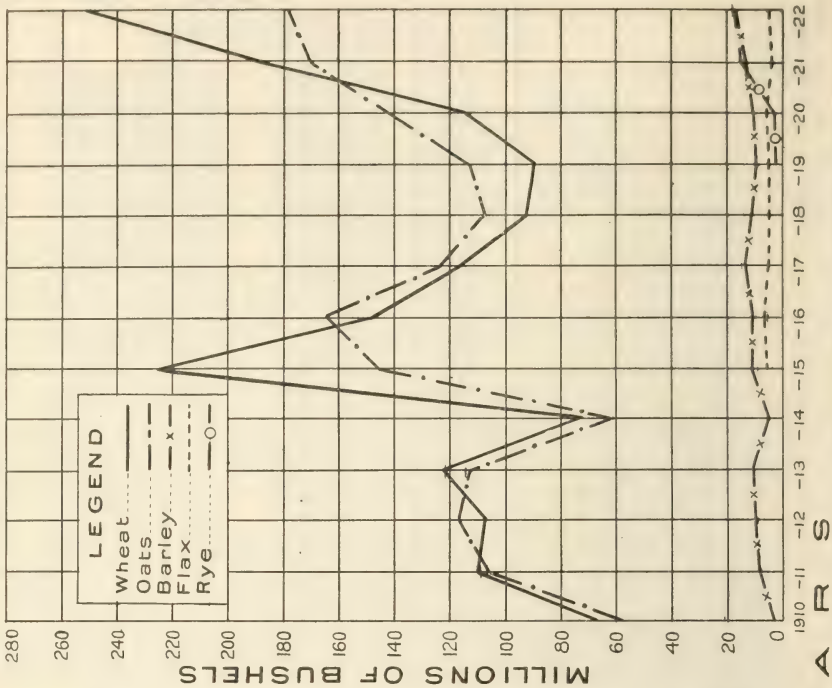
* Department of Agriculture, Regina, Saskatchewan

SASKATCHEWAN 1910 — 1922

ACREAGE SOWN TO CHIEF CROPS



YIELD OF CHIEF CROPS



STATEMENT SHOWING SASKATCHEWAN'S PRODUCTION OF WHEAT, OATS, BARLEY AND FLAX COMPARED WITH THAT OF TWELVE STATES OF THE UNION PRODUCING THE LARGEST QUANTITIES OF THESE GRAINS IN THE SAME YEAR.*

	1920	1919	1918	1917
Saskatchewan.....	270,890,768	215,610,916	215,839,000	259,913,400
North Dakota.....	154,616,000	107,560,000	209,705,000	121,201,000
Minnesota.....	183,644,000	148,527,000	254,190,000	208,376,000
Illinois.....	208,700,000	195,362,000	271,322,000	274,925,000
Iowa.....	250,807,000	226,853,000	285,060,000	273,346,000
South Dakota.....	130,753,000	104,235,000	182,623,000	149,954,000
Kansas.....	227,299,000	210,895,000	159,491,000	122,583,000
Nebraska.....	150,989,000	136,229,000	103,099,000	134,880,000
Wisconsin.....	129,042,000	99,552,000	145,382,000	123,527,000
Indiana.....	102,440,000	100,082,000	136,327,000	119,424,000
Ohio.....	102,862,000	107,976,000	121,969,000	120,956,000
Michigan.....	76,954,000	61,182,000	86,176,000	74,638,000
Oklahoma.....	97,360,000	103,015,000	64,439,000	62,244,000

*Department of Agriculture, Regina, Saskatchewan.

The commencement of seeding operations during the past fifteen years has varied from April 1 to May 6 with a ten year average for the whole province of April 10. The corresponding average for general seeding operations was April 20. Harvest operations usually commence about the middle of August. Wheat cutting is completed on an average by the end of the first week of September, barley cutting a few days earlier, oat cutting about the middle of the month and flax cutting by the end of the month or early in October. Threshing commences about the middle of September or slightly earlier and is rushed to completion as rapidly as labour and weather conditions permit.

The large straw-burning steam threshing engines, so common a few years ago, are now being replaced by gasoline engines of the traction type which are also employed in ploughing and cultivating the land. The storing of the grain is provided for by 2,184 elevators, with a total capacity of nearly 69,000,000 bushels, in addition to the Moose Jaw and Saskatoon interior elevators of 3,500,000 bushels capacity each.

After threshing operations are completed as much land is ploughed as time will permit before freeze-up occurs. Usually less than half this work can be accomplished before winter sets in, the balance being left over till spring. The area under summerfallow is annually increasing while the new breaking is decreasing. The following table shows the areas of new breaking, summerfallow, fall ploughing and stubble lands prepared for the years 1914 to 1921, inclusive.

	New breaking of previous year	Summer-fallow of previous year	Fall ploughing of previous year	Spring ploughing and stubble	Total acreage
1914.....	1,148,855	2,775,489	1,733,805	4,253,305	9,912,464
1915.....	1,075,955	2,601,299	4,407,320	2,459,222	10,543,796
1916.....	945,598	2,668,400	2,253,891	7,085,511	12,953,400
1917.....	659,081	2,536,428	1,295,987	9,727,026	14,218,522
1918.....	431,698	3,758,941	1,943,980	9,766,898	15,901,512
1919.....	614,980	4,060,801	1,164,444	10,494,067	16,334,292
1920.....	849,759	4,395,746	498,724	11,603,672	17,347,901
1921.....	549,837	3,751,751	420,454		

Total of land prepared in 1920 for 1921 crop.....4,722,012 acres

In the early days of settlement wild hay was the only variety that could be obtained locally. Now domestic grasses, such as rye and brome, are being successfully grown in all parts of the province, while timothy and alfalfa are gaining a place of considerable importance. Alfalfa was sown on 7,341 acres in 1922, yielding 13,600 tons, valued at \$170,000. Sun-flowers also have been extensively harvested for silage.

The production of wool has steadily increased. During the year ending April 30, 1921, the Saskatchewan Branch of the Canadian Co-operative Wool Growers handled, through the Regina warehouse, a total of 678,519 pounds of wool and 5,989 pounds of pelts from Saskatchewan growers. The production and value of live stock are shown in the following table:—

LIVE STOCK IN SASKATCHEWAN, 1915-1920

Year	Horses and mules	Cattle	Sheep	Swine
1915.....	667,443	931,561	192,024	329,246
1916.....	841,907	1,011,393	124,237	530,727
1917.....	888,673	1,211,090	127,892	573,938
1918.....	1,000,076	1,279,331	134,177	521,240
1919.....	1,092,974	1,379,563	146,911	432,367
1920.....	948,280	1,324,062	160,918	321,900

The homesteading of the land was at its maximum in 1910, when some 26,878 entries were recorded. The influx of population continued to rise for a time, the greatest number of immigrants to arrive in one year being 46,158, in 1912. The great war and the ensuing reconstruction period interfered with immigration for about five years, but the influx is now resumed. In 1920 the arrivals in Saskatchewan numbered 14,287, and in 1921 they numbered 13,392.

The following table contains statistics of the homesteading for a number of years when the highest limits were being reached:—

STATEMENT SHOWING THE NUMBER OF HOMESTEAD ENTRIES IN SASKATCHEWAN MADE EACH MONTH OF THE YEAR 1910-1920

—	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910
January.....	284	72	10	172	268	327	66	657	803	642	976
February.....		63	86	128	298	293	53	541	893	836	1,069
March.....		71	9	220	368	416	796	826	1,190	1,610	2,688
April.....	481	198	132	274	371	475	1,166	1,637	2,263	2,483	4,240
May.....		228	112	234	508	516	875	1,523	1,948	2,328	3,745
June.....		186	130	394	536	756	1,262	1,811	2,243	2,516	3,440
July.....	573	24	172	321	477	742	1,178	1,720	2,26	2,446	2,576
August.....		177	121	317	383	658	757	1,231	1,726	2,194	1,958
September.....		175	78	230	396	422	436	840	1,275	1,67	1,530
October.....	388	181	9	255	294	484	885	1,156	1,213	1,49	1,845
November.....		114	74	275	317	692	624	1,417	1,513	1,422	1,783
December.....		127	68	147	299	568	571	1,168	1,088	1,032	1,028
Total.....	1,726	1,841	1,286	2,967	4,517	6,349	9,752	14,524	18,425	20,681	26,87

In the growing of vegetables and roots Saskatchewan has had an experience similar to that of its hay productions. Only in recent years has the province come to the front in these respects. Now it is conclusively proven that table corn, peas and beans, as well as all the common varieties of vegetables, roots and small fruits, can be grown most successfully. Several prizes have been won by exhibits of these vegetables at

international soil products expositions. The province now imports immense quantities of canned fruit and vegetables which might be grown and canned to better advantage within its own borders and adjacent to the centres of greatest consumption. With cheaper labour sugar beets might be grown in sufficient quantities to warrant the establishment of a refinery, while the ever-increasing dairy herds and poultry farms of the province offer a profitable use for field roots. The yield of potatoes in 1922, sown to 55,600 acres, was 4,012,000 centals, or hundredweight, valued at more than \$3,000,000.



Cutting Sun-flowers for Fodder.

In live stock the province is well supplied and, while there has not been an increase in the numbers during the past few years, particular attention is being paid to the improvement of the grade. Not "more stock" but "better stock" has been the advice of the agricultural officials, and as a result the proportion of pure bred to grade stock is steadily on the increase. The value of milch cows and other cattle in Saskatchewan in 1922 is given by the Dominion Bureau of Statistics as \$44,469,000 and the estimated numbers of farm live stock, as follows: Horses, 1,143,502; milch cows, 456,006; other cattle, 1,146,780; sheep, 191,937; swine, 563,069. (*Monthly Bulletin Agricultural Statistics*, February, 1923.)

Poultry farming is making rapid strides, while bee-keeping does not appear to have yet been undertaken to any extent. Dairying has been established as an extensive and permanent industry and is proving one of the greatest boons to the province. It not only creates a steady flow of business throughout the entire year, but draws the country gradually towards a condition of "mixed farming" which must eventually be accomplished to keep up its productiveness.

Government Aid

The provincial Department of Agriculture is most active in furthering the interests of farming in Saskatchewan. Its organization includes several distinct divisions, of which the Dairy Branch, Live Stock Branch, Field Crops Branch, and the Co-operation and Markets Branch are most closely associated with the improvement and advancement of the various lines of agricultural pursuit. In addition to these branches the department has a Labour Bureau, Statistics Branch, and Game and Museum Branch.

Saskatchewan has placed on her statute books many Acts for the encouragement and betterment of agricultural conditions. Many of these, after trial, have been further amended to improve their working conditions, so that now there is no province in Canada more progressive in the matter of useful farm legislation.

Among the many beneficial acts may be cited the Saskatchewan Co-operative Elevator Company Act, the Saskatchewan Co-operative Creameries Act, the Municipal Hail Insurance Act, the Stray Animals Act, the Farm Implements Act, the Agricultural Aids Act, the Municipalities Seed Grain Act, the Noxious Weeds Act, the Live Stock Purchase and Sale Act, the Agricultural Instruction Act, the Dairyman's Act, the Horse Breeder's Act, the Wolf Bounty Act, the Game Act, the Saskatchewan Farm Loan Act, the Egg Marketing Act, the Dairy Products Act, the Agricultural Co-operative Associations Act, the Stock Inspection Act, and the Agricultural Societies Act.

The Farm Loan Board is authorized to loan money to farmers for productive and improvement purposes on the security of first mortgages on their farm. The amount loaned does not exceed fifty per cent of the value of the security offered. The rate of interest is the lowest possible. The term is for thirty years, on an amortization basis with the option of repaying more rapidly. During the fiscal year 1922 the sum of \$388,879 was expended in the administration of this Act. The sums now voted annually by the provincial assembly to be expended under the terms of the Agricultural Aids Act amount to about half a million dollars. As money is essential for the expansion of any industry these actions of the government in providing it for the use of the farmers are most opportune.

The Co-operation and Markets Branch has achieved remarkable results, and to-day Saskatchewan stands out prominently as the leader of North America in the application of the principles of co-operation. The Saskatchewan Co-operative Elevator Company, Saskatchewan Co-operative Creameries, Limited, the Municipal Hail Insurance Association, and the Co-operative Wholesale Department of the Saskatchewan Grain Growers Association are outstanding examples of remarkable successes attending such enterprises. Nearly 400 co-operative associations throughout the province have been organized and registered under the guidance of this branch. The co-operative branch itself conducts enterprises in the marketing of wool, and an educational campaign has increased the standard of this product.

The Dairy Branch is doing a most valuable work in fostering the growth of cream production and butter-making throughout the province. No other branch of farming is more important than this. It creates a stability and permanence that grain growing or stock raising alone fails to do. The value of dairying is now recognized by a large percentage of

the most progressive farmers, who realize that the development of dairy and live stock industries is essential to a permanent system of agriculture in Saskatchewan. Farmers are quick to see that in this department of their labour they have an opportunity to provide for a steady cash income the year round, to spread out the year's work more uniformly and to keep up the fertility of the soil. The production of creamery butter in the province has advanced from 143,645 pounds in 1900 to 7,030,053 pounds in 1921, valued at \$2,552,698. It is a self-evident fact that the payment of this amount into the farmers' hands for a commodity which does not deplete the soil's fertility is a matter of great importance to the business life of the province, and the fact that not more than one-fifth of the farmers of Saskatchewan are creamery patrons gives an idea of the future possibilities. The transition to more intensive methods of mixed farming and dairying is rapidly spreading, and speaks well for the future prosperity of the province.

During the year ending April 30, 1921, four and three-quarter million pounds of butter were inspected by the Government and grade certificates were issued accordingly. Following are the percentages of Saskatchewan government graded butter sold to the different Canadian markets and to the United States during 1920:—

Eastern Canada.....	23.65 per cent
Western Canada.....	19.58 per cent
Saskatchewan.....	47.00 per cent
United States.....	9.77 per cent

During the year 1921 there were 56 creameries in operation in the province. About half of these were co-operative plants, operated by the Saskatchewan Co-operative Creameries, Limited, with head office at Regina. The remainder were privately owned.

The following table* shows the annual growth of Saskatchewan's creamery business for the past fifteen years:—

Year	Creamery output, pounds	Year	Creamery output, pounds
1906.....	132,446	1914.....	2,716,400
1907.....	88,617	1915.....	3,857,862
1908.....	287,520	1916.....	4,337,958
1909.....	415,916	1917.....	4,208,759
1910.....	596,228	1918.....	5,009,014
1911.....	930,830	1919.....	6,622,572
1912.....	1,009,604	1920.....	6,368,895
1913.....	1,414,491	1921.....	7,030,053

*Report, Department of Agriculture, Saskatchewan, 1921.

While the outstanding feature of Saskatchewan's dairy development has been the co-operative movement, private enterprise has also done much in building up the industry. In 1920 there were 25 privately-owned creameries in operation in the province, which manufactured 57.39 per cent of the total output of the province. The government grading of butter, begun in 1913, has now become an essential part of the province's dairy operations. Creamery concerns are co-operating in maintaining the commercial standard of the butter, while the public are becoming more discriminating as to quality and uniformity throughout the year.

The Live Stock Branch devotes its energies to the betterment of the live stock industry generally. Chief among its varied duties has been the importation of pure bred stock for breeding purposes, which are disposed of to farmers at actual cost and on favourable terms. The distribution of live stock to Saskatchewan farmers on part cash and part credit basis is the most important of the various lines of work carried on by the Live Stock Branch. This constructive policy, carried on for the past ten years, is showing beneficial results for the live stock industry of the province.

Realizing the increasing necessity for mixed farming, and recognizing the endeavour of a large proportion of the agricultural population to obtain good stock, the Government of the Province of Saskatchewan has made provision whereby *bona fide* farmers desirous of obtaining foundation breeding stock may do so at first cost, whilst at the same time having reasonable assurance that the animals will be as represented. This is a most important action and is having far-reaching and beneficial results in raising the standard of quality of horses, cattle, sheep and hogs throughout the province. It costs no more to raise or keep a good animal than one of inferior grade, while the returns obtained usually spell profit or loss as the case may be. The campaign for better stock is thus being augmented in practical form. Not only do the duties of the branch concern the production of stock but also its disposal to the best advantage. Transportation problems, stock yards management, packing house methods, activities of commission men and drovers and financial aids rendered by banks all require constant attention. Steps to put the industry on a sound basis have been most carefully and thoroughly considered, and the stock raiser may feel assured of the best conditions possible under which to operate.

The following table, showing the number of horses, cattle, sheep and swine in the province from 1917 to 1922, was compiled by the Dominion Bureau of Statistics:—

Year	Horses	Milch cows	Other cattle	Total cattle	Sheep	Swine
1917.....	880,301	354,430	856,687	1,211,090	127,892	573,938
1918.....	990,009	352,989	926,342	1,279,331	134,177	521,240
1919.....	1,078,452	374,062	1,005,501	1,379,563	146,911	432,367
1920.....	939,805	354,507	969,555	1,324,062	160,918	321,900
1921.....	1,169,278	421,706	1,141,626	1,563,332	188,021	432,776
1922.....	1,143,502	456,006	1,146,780	1,602,786	191,937	563,069

The Weeds and Seed Branch have a dual task in coping with that ever persistent enemy of the farmer—the weed—and in choosing and testing clean and sound seed. These matters may appear trifling on the surface, but in reality if neglected spread disaster with alarming rapidity. Sound seed of strong germinating qualities and free from the presence of injurious neighbours is essential to ensure a healthy crop growth. Land overrun by obnoxious weeds cannot be expected to produce good results, and, if steps are not taken to eradicate the evil, the land soon becomes useless either for grain growing or stock raising. Both urban and rural municipalities are required to appoint weed inspectors before the end of March for the current year. An Interprovincial Weed Train has been operated in the three Prairie Provinces. By means of lectures, supplement^{ed} by demonstration, the seriousness of the weed problem has been

brought before the farmers. In overcoming the gopher-pest, the Government has enlisted the assistance of school children, offering prizes for the largest number destroyed. Probably a million bushels of grain were saved by this means in 1920.

Good work is being done in agricultural extension in connection with the various agricultural societies of the province, the membership of which now numbers over twenty thousand. The Agricultural Society is the most effective medium through which the Department of Agriculture and the College of Agriculture can assist those who are tilling the land, and the object in view is to make rural life profitable, healthful, comfortable and attractive. During the year ending April 31, 1921, the following enterprises were conducted under the Provincial Agricultural Societies: 141 exhibitions, 32 ploughing matches; 29 standing crop competitions; 22 live stock sales; 42 seed fairs, beside other competitions, such as seed drilling and summerfallow, spring stock and poultry shows. In educational work, there were short courses in agriculture, courses for boys attending camps, engineering courses and miscellaneous meetings of agriculturists. Modern and scientific methods of farming are constantly kept before the public.

The Federal Department of Agriculture at Ottawa is also most active in furthering the industry in Saskatchewan. For many years an extensive experimental farm has been conducted at Indian Head. A wide range of live stock is constantly kept on hand. The keeping of poultry and bees has become a successful branch of the work. Experiments in rotation and cultural work are carried out on large scales, while cereals, forage plants and horticulture receive much attention. More recently experimental stations have been established at Rosthern, Scott and Swift Current and are meeting with remarkable success. The Federal Department embraces a number of divisions specializing on such subjects as chemistry, field husbandry, animal husbandry, horticulture, cereals, botany, bees, forage plants and others. The province benefits by the results obtained from the work and experiments of these divisions.

Successes and Opportunities

The preceding pages amply illustrate the remarkable success attained by agriculturists in Saskatchewan. Homesteaders who have settled on their "quarter" without means or capital, save an optimistic spirit backed by a stout heart, have found themselves in a few years financially independent and in possession of an enviable farm home in the midst of smiling plenty. In like prosperity are those who have purchased farms and paid for them out of the proceeds of the first few crops. Testimonials are freely submitted from delighted purchasers who have made payments in full from a single crop.

No reference to the successes attained by Saskatchewan farmers would be complete without mention of the envious record attained by this province in the winning of awards in various wide competitions in agricultural exhibits. The proud boast of the province of being the king of wheat-growing countries, has been substantiated by Mr. Seager Wheeler, of Rosthern, who has five times won the world's championship in the wheat class. In grains of all kinds, grasses, and even during later years

in vegetables, the province has attained remarkable success in competition with all comers. Out of forty-six exhibits shown at the Dry Farming Exposition at El Paso in 1916 by farmers from Saskatchewan forty-four prizes and three sweepstakes were captured. Equally satisfactory results were obtained at the International Soil-Products Exposition and Dry Farming Congress held at Peoria, Illinois, in 1917, and at Kansas City, Missouri, in 1918. In both quantity and quality the yields of the Saskatchewan farms are able to hold their own with the world.

With improved agricultural conditions, better transportation facilities, rural telephones, and good markets the opportunities for success in grain farming, mixed farming, dairying, and poultry-raising are better than ever before, even if free prairie homesteads are almost a thing of the past. The chances for the man without means to file on a quarter section which will bring immediate returns of much value are not good. Homesteads are still available but not on the prairie. The poor man's opportunity still awaits his coming but the procedure is not the same as in the boom days. In the northern parts of the province lightly wooded homesteads are to be had. The land here is good and the district is admirably adapted to mixed farming. Until sufficient land is brought under cultivation to yield a revenue that will support him the homesteader in his spare months is assured of plenty of work at good wages—an advantage not available in the earlier days. If not afraid of work the man without means need not hesitate. In ten or fifteen years he will, with ordinary luck, be possessor of a good farm home that will yield him an independent living.

The greatest opportunities lie in the vast areas of unimproved vacant land held by absentee landowners, railroad companies and others. These lands comprise a considerably greater area than that occupied. They are scattered throughout the whole province and have the advantage of being sandwiched in between the improved lands, thus giving their purchasers the advantage of roads, schools, markets, and the like enjoyed by older settlers. The average man who has homesteaded will tell you that, provided he has enough means to warrant the undertaking, he would buy vacant land rather than repeat his homesteading experiences were he called upon to decide again. On such locations as these the newcomer finds himself launched at once into the midst of a flourishing settlement and his pioneering is free from hardships and loneliness. Neighbours assist him in erecting a house and getting a start, in return for which they are glad of his help in harvest time before he has a crop of his own. In like manner his land is quickly broken, crops are soon being harvested, and often such men pay for a farm before a homesteader gets his patent. Prices for vacant lands are very reasonable, all things considered, and will never be less.

School lands, purchasable from the Dominion Government, offer special inducement to the settler. Sections eleven and twenty-nine in every surveyed township in the Prairie Provinces are set apart as an endowment for purposes of education, and are designated school lands. The area of school lands surveyed in Saskatchewan to January 1, 1923, was 3,942,000 acres, of which area 1,500,000 acres have been sold at the average price of \$17.50 per acre. This leaves about 2,440,000 acres of surveyed school lands unsold.

Improved farm lands are being bought and sold at reasonable prices, depending to a large extent on their location, amount of improvements, and records in production. Both improved and unimproved farm lands in Saskatchewan represent the soundest of investments. To the extensive operator no better field is offered. The great level stretches of choice land, free from hills or ravines, stones or stumps, offer unparalleled opportunities for the successful operation of power machinery. At the prices for which lands can be purchased in Saskatchewan to-day no mistake can be made in securing all one can faithfully attend to. The rural opportunities offered in the province of Saskatchewan are genuine and attractive, and success awaits the newcomer now as in years past.

CITIES AND TOWNS

For a purely agricultural province the growth of Saskatchewan's urban centres is most remarkable. It demonstrates with striking force the source of wealth derived from the land. Contrary to the growth of seaports due to commerce, or to the development of great industries in other centres producing manufacturing towns, the cities of Saskatchewan owe their growth to agricultural activities. The various cities, towns and villages of the province have sprung into existence to meet the requirements of their immediate vicinities as the land became settled, and their growth has been entirely dependent on, and in harmony with, the progress of agricultural development.

The agricultural barometer indicates the state of the city's business as accurately as it does that of the farm. As the time for harvest approaches the banker watches the weather as anxiously as the farmer. Railway companies and financial institutions send out an army of experts to keep them supplied with crop reports and estimates of the probable yield. Almost every business move depends on these reports. The success or failure of the crop is of vital interest to every home and forms the chief topic of conversation on the street, in the club, or about the family fireside as the climax approaches. It is needless to state that success has happily been the good fortune of the province almost universally.

The urban growth, as compared with the rural, makes an interesting study. While both have been wonderfully rapid the greatest rate of increase has been in the former. The general tendency of the world has been a drift of the population to the centres and strenuous efforts are everywhere in evidence to get the people back to the land. In a new country such as Saskatchewan, advertised as a farming district offering free lands, one might expect the rural population to increase more rapidly than the urban. Some explanations may be offered in this respect. In the first place the census returns include as "urban" the population of villages, which after all are largely rural, containing many farmers whose lands adjoin. The same applies to a large extent to the towns. Before roads or schools were available many farmers established their families in the nearest town and divided their own time between town and farm. With the coming of better roads came also the automobile, permitting him to continue the arrangement to even better advantage. Children were formerly sent away for their higher education. Now they receive it in their own province. Prosperous farmers spent their winters at the coast or in eastern or southern cities. With the improved conditions in their own cities and the advantages of modern utilities they are now building city homes in their own province.

The following figures are compiled from the official Dominion census returns of 1901, 1911 and 1921.

SASKATCHEWAN URBAN AND RURAL POPULATION

Class of place	1921		1911		1901		Per cent of total population		
	Number of places	Population	Number of places	Population	Number of places	Population	1921	1911	1901
Total population.....		757,510		492,432		91,270	100.00	100.00	100.00
Urban places.....	430	218,958	249	131,395	35	14,266	28.90	26.68	15.63
Cities.....	7	97,833	4	62,294			12.91	12.65	
Towns.....	78	60,970	50	36,844	7	7,928	8.05	7.48	8.69
Villages.....	345	60,155	195	32,257	28	6,338	7.94	6.55	6.94
Rural parts.....		538,552		361,037		77,013	71.10	73.32	84.37

Urban places have shown an increasing percentage of the whole population during the past twenty years, and rural parts a corresponding decreasing percentage, but the number of rural dwellers forms nearly three-quarters of the population.

The cities and towns, with their population, according to the census of 1921, are shown in the following tables. In addition there are 345 incorporated villages.

CITIES

City	Population	City	Population
Moose Jaw.....	19,285	Saskatoon.....	25,739
North Battleford.....	4,108	Swift Current.....	3,518
Prince Albert.....	7,558	Weyburn.....	3,193
Regina.....	34,432		

TOWNS

Town	Population	Town	Population
Alameda.....	208	Macklin.....	364
Alsask.....	360	Maple Creek.....	1,002
Arcola.....	605	Melfort.....	1,746
Asquith.....	311	Melville.....	2,808
Assiniboia.....	1,006	Milestone.....	472
Balgonie.....	204	Moosomin.....	1,099
Battleford.....	1,229	Morse.....	559
Biggar.....	1,535	Mortlach.....	398
Bredenbury.....	290	Nokomis.....	547
Broadview.....	839	Ogema.....	345
Cabri.....	532	Outlook.....	704
Canora.....	1,230	Oxbow.....	602
Carlyle.....	394	Qu'Appelle.....	688
Carnduff.....	494	Radisson.....	431
Caron.....	243	Radville.....	883
Craik.....	570	Rosetown.....	865
Davidson.....	652	Rosthern.....	1,074
Delisle.....	273	Rouleau.....	590
Duck Lake.....	437	Salteoats.....	479
East End.....	427	Scott.....	236
Estevan.....	2,290	Shaunavon.....	1,146
Fleming.....	263	Sintaluta.....	320
Francis.....	173	Strasbourg.....	514
Govan.....	495	Sutherland.....	961
Gravelbourg.....	1,106	Tisdale.....	783
Grenfell.....	765	Unity.....	611
Gull Lake.....	788	Vonda.....	383
Hanley.....	312	Wadena.....	544
Herbert.....	827	Wapella.....	401
Humboldt.....	1,822	Watrous.....	1,101
Indian Head.....	1,439	Watson.....	396
Kamsack.....	2,002	Whitewood.....	499
Kerrobert.....	788	Wilkie.....	778
Kindersley.....	1,003	Wolseley.....	956
Langham.....	430	Wynyard.....	849
Lanigan.....	426	Yellowgrass.....	468
Leader.....	765	Yorkton.....	5,151
Lemberg.....	472	Zealandia.....	245
Lloydminster (part).....	469		
Lumsden.....	498		

The Provincial Government, through its Department of Municipal Affairs, exercises a general supervision over the welfare of all urban and rural municipalities. Considerable legislation in the interests of the municipalities has been enacted from time to time, of which the "Town Planning and Rural Development Act" is worthy of special mention. It came into effect on July 1, 1918, and aims to insure that townsites will be laid out on modern, healthful lines, rather than for the purpose of speedy sale and high profits to the vendors. "The Village Act" has been amended to provide for assessment of lands, buildings and improvements, personal property and income. "The Union Hospital Act," "The Arrears of Taxes Act" and "The Seed Grain Act" are other progressive enactments.

Urban Opportunities

Literature published regarding the opportunities offered by the Prairie Provinces has heretofore emphasized agricultural development, and no particular attention has been given to urban opportunities. But with a population already numbering three-quarters of a million in Saskatchewan it is evident that opportunities must present themselves to the manufacturer, the merchant, and the professional man.

In the investment, however, of a large amount of capital the field must be thoroughly examined and the location decided upon only after the most mature deliberation. Unsuitable locations and misdirected energy often result in failures that are otherwise entirely unwarranted. In early days it was said that the west might attain to great agricultural proportions but could not hope to succeed along industrial or manufacturing lines. This misconception is being rapidly dissipated as it becomes evident that the industrial and commercial activities of the province have every promise of keeping pace with its agricultural expansion. The tremendous volume of products annually yielded by Saskatchewan farms offers unlimited opportunities to such industrial concerns as cereal mills, packing plants, creameries and canneries. As the abattoirs of the province increase their capacity the opportunity arises for tanners, harness makers, saddlers, shoemakers and other leather manufacturers to establish permanent and remunerative local industries. It appears only reasonable that many products of the farm which return to it in various forms of manufactured articles might be treated within the province itself. Even should the cost of such process be higher than in distant centres the saving in time and money spent on freight is an offset of considerable proportions.

The products of the forest and lakes might be treated more thoroughly than at present. Sawn lumber and frozen fish are being shipped out of the province in great quantities, yet wooden boxes and canned fish are being imported. This suggests that wood-working industries might find lucrative fields in some of the towns adjacent to the timber areas and that avenues are open for the better utilization of the vast quantities of fish to be found in the northern waters. Large areas of swamp, muskeg, and bog found in the northern parts of the province will produce peat on a large scale.

The mineral resources of the province are only beginning to be known, and prominent among the possibilities is the outlook for gas and oil. At

present unlimited opportunities for the manufacture of brick, fire-brick, tile and pottery are available in the extensive high-grade clay areas of the southern parts of the province where the vast adjoining lignite coal fields guarantee unlimited power for industrial purposes.

It has been demonstrated that the production of flax and wool can be most successfully carried on in the southern parts of the province. There is no real reason why this raw material should not be locally manufactured into finished articles of wear. Only small fruits are grown in the province, but these and vegetables of every description flourish most luxuriantly and would support a number of canneries. These suggestions indicate the manufacturing possibilities of the province. Cheap power is, of course, an item of considerable importance, and this has not been overlooked by any municipality. It has been made one of their most important considerations, and municipally-owned plants of the province have generally made provision for the supplying of power at exceptionally low figures.

Opportunities in the commercial field throughout the province are numerous. There is not a village, town, or city in the province that is not making rapid strides, in keeping with the growth of the rural districts. Commercial houses of every description may safely depend on an ever-increasing volume of business, which the certain expansion of the province in the coming years will guarantee.

To the professional man the attractions are none the less inviting. Many a young lawyer or doctor has come to this province and found in one of the outlying new centres of settlement an opportunity to establish a professional career. In a few years he has found himself located in a thriving town with a large and lucrative practice and a home surrounded by every comfort. It is not uncommon to find such men in a few years rising to the highest positions of public trust and responsibility. Many a member of parliament, city mayor, or other prominent official can point to such an experience.

The smaller towns and villages of the province offer such opportunities to professional men of all callings, while the larger cities call for men of the highest degree of proficiency. The growth of the Educational Department, culminating in the Provincial University, has created a demand for school teachers, music teachers, lecturers and educationists in general.

As the agricultural pursuits of the province become scientific and intensive, the industrial activities of the cities will become greater and business and professional advantages more noticeable.

The remarkable advancement achieved by the seven cities of the province is only a fair sample of the general forward trend of all its urban centres and rural districts. Another unfailing indication of its financial growth has been the establishment throughout the province of numerous branches of nearly all the chartered banks of Canada. In 1905 there were 39 such banks in Saskatchewan. In 1921 the number had reached 529. The clearing house reports of the chartered banks in Regina, Saskatoon, Moose Jaw, and Prince Albert, for the calendar year 1921, were as follows:—

Regina.....	\$ 203,659,640
Saskatoon.....	100,523,291
Moose Jaw.....	74,739,761
Prince Albert.....	18,545,759

\$ 397,468,451

The faith of the leading financial houses of Canada in the future of Saskatchewan's various municipalities is thus made manifest in concrete form by the establishment of these many branches. Further particulars of these banks are shown in the following table:—

LIST OF THE CHARTERED BANKS OF CANADA HAVING BRANCHES IN SASKATCHEWAN APRIL, 1923

Name of Bank	Head Office	Name of Bank	Head Office
Commerce.....	Toronto, Ont.	Nova Scotia.....	Halifax, N.S.
Dominion.....	Toronto, Ont.	Royal.....	Montreal, Que.
Hamilton.....	Hamilton, Ont.	Standard.....	Toronto, Ont.
Hochelaga.....	Montreal, Que.	Sterling.....	Toronto, Ont.
Home.....	Toronto, Ont.	Toronto.....	Toronto, Ont.
Imperial.....	Toronto, Ont.	Union.....	Winnipeg, Man.
Montreal.....	Montreal, Que.	Weyburn Security.....	Weyburn, Sask.

Brief descriptions of the seven cities of the province follow. Persons desirous of obtaining fuller information or particulars of business, professional, educational or other opportunities in these cities, or in any of the towns and villages of the province, should communicate with the local officials. It may be taken for granted that each city and town has a Board of Trade. Inquiries, therefore, should be addressed to the secretary of such body or to the chief municipal corresponding officer, namely, the city clerk, town clerk, or village secretary-treasurer, as the case may be.

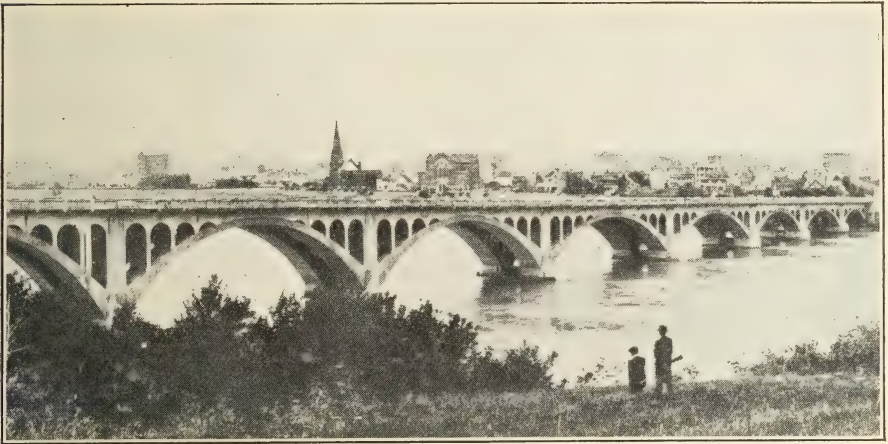
Regina

The history of Regina dates back to 1882, when the first settlers arrived and erected a canvas town about a mile west of the centre of the present city. The town site was selected the following year, being arranged jointly by the Dominion Government and the Canadian Pacific Railway Company. The name "Regina" was conferred upon this town-site by the Marquis of Lorne, then Governor General of Canada, and on the 27th of March, 1883, the town was declared to be the seat of government of the Northwest Territories in place of Battleford. The Northwest Mounted Police also selected it as their headquarters about the same time. A post office, school, and a Dominion Lands Office were opened in the spring, and by October the Government buildings, Council Chamber, and Indian Office were ready for occupation.

Regina was incorporated as a city on June 19, 1903, just twenty years later. In 1905 it became the capital of the newly created province of Saskatchewan and in 1908 the erection of the Parliament Buildings was commenced. It has been said that there are no Parliament Buildings more dignified or better adapted to the needs of legislative work than these. The buildings are constructed of Tyndall stone, fireproof throughout, and cost approximately \$4,137,000.

Regina is the financial centre of the province, and the principal distributing point for the middle west. Fourteen of the leading Canadian banks now have branches in the city and the majority of them have

erected substantial and elaborate buildings of their own. The Bank Clearing House Association was established in 1909 and the clearings for 1922 were \$184,949,431. Practically every loaning institution of importance in Canada has an office in the city. A large volume of business is transacted in the purchase and sale of bonds and debentures of the municipalities and school districts of Manitoba, Saskatchewan and Alberta, Regina being the headquarters in Western Canada for this class of business.



University Bridge, Saskatoon.

Twelve lines of railway radiate in all directions from the city, and plans are under way for the construction of ten additional branch lines. The city has also some 320 acres of municipally owned industrial sites served by a spur-track system for the benefit of manufacturers and distributing houses. It is the central distributing point for farm implements and machinery.

Regina has now a large number of manufacturing concerns, some 114 wholesale and over 360 retail houses. Included in these are the \$200,000 buildings of the Robert Simpson Western, Limited, erected in 1916, the \$500,000 refining plant of the Imperial Oil Company, erected in 1916, the \$200,000 mail order house of the T. Eaton Company, Limited, and many other large buildings.

The city owns its street railway, light and power plant, and municipal stock yards. It is the headquarters of the Saskatchewan Co-operative Elevator Company and the Grain Growers' Grain Company, both of which have been of remarkable benefit to the grain-growing communities. Its public market is under the control of the Local Council of Women. Besides the government and municipal buildings, the city has the Regina College, St. Chad's College, the Provincial Government Normal School, all carried out in Gothic treatment, and a Collegiate Institute of classic design. Its many schools, churches, hospitals, and business blocks are a credit to any city, while its uniformly superior residences have given to it the title of "The City of Beautiful Homes." The population in 1921 was 34,342.

Saskatoon

The city of Saskatoon is beautifully situated on the South Saskatchewan river in the heart of one of the greatest wheat growing belts of the world. Its geographical position makes it the distributing centre for 47,000 square miles of territory. The city's growth has been remarkable. In 1901 there were 113 inhabitants; in 1911 the population had increased to 12,004, and the census of 1921 showed 25,739. In 1909 it was selected as the seat of the Saskatchewan Provincial University and Agricultural College and has thus become generally known as "The University City." It has 12 large public schools and a Collegiate Institute. The churches, numbering 17, are celebrated for beauty of architecture.

The unique geographical location of Saskatoon makes it a natural centre for a vast district. Here is found a favourable site for crossing the valley of the South Saskatchewan river, and the three great Canadian Transcontinental lines have bridged the waters with structures ranging in length from 1,000 to 1,530 feet. There are also two traffic bridges. One is built of steel and is 1,000 feet long. The other is a most beautiful reinforced concrete structure, consisting of ten arches, four of which have a span of 150 feet each. The total length of this bridge is 1,593 feet. The traffic of this district is thus focused on the city. The river also provides an unlimited supply of pure water, and this is augmented by a modern filtration plant.

Municipal ownership is exercised in relation to water, light, power, street railway, sewerage and hospitals. These various utilities have been most successfully managed and show surplus revenues over expenditures. Its splendid shipping facilities, central location and the great agricultural district surrounding it guarantee the commercial future of this progressive city. Among the industrial institutions are the Dominion Government elevator with a capacity of 3,500,000 bushels and the mammoth western plant of the Quaker Oats Company of Chicago.

Among the natural resources which are likely to be available for the city's use may be mentioned coal, gas and building material. These are all found at no great distance and will probably be made accessible in a short time. Building stone is found in the immediate vicinity and has already been utilized in the erection of the University buildings.

As a residence city Saskatoon takes a leading place. Its site, overlooking the valley of the river, and commanding an extensive view of the prairies, is admirable. Its wide and well-laid-out streets, flanked by avenues of trees, its parks and drives, and its general planning along sanitary, healthful and progressive lines, make it an attractive location for homes. The social, education and business advantages of this city are worthy of consideration.

Moose Jaw

This progressive city is located on Moose Jaw creek, about fifty miles west of Regina, and also in the heart of an extensive wheat belt. It is the railroad city of the province, being the divisional point of the Canadian Pacific Railway. These yards are the third largest individually owned in the world. Founded as a town in 1884, on this newly constructed

railway, it early became an important divisional point, with an ever-increasing pay-roll which went to build it up. From here lines were built southeasterly to Minneapolis and St. Paul and northwesterly to Edmonton, in addition to several local lines. The surrounding district developed into a rich wheat-growing area, and the city now finds itself the centre of an extensive and populous agricultural district. Its population has increased from 1,558 in 1901 to 19,285 in 1921. Its commercial and industrial expansion has been rapid. The Dominion Government has erected an elevator here with a capacity of 3,500,000 bushels. Flour-milling has been extensively prosecuted, while the butter now graded and shipped from this point amounts to considerable proportions.

Moose Jaw owns and operates its own light and power plant. The city is well laid out and has a substantial class of public buildings, business houses and residences. Its educational and social facilities are in keeping with its general advancement and the future of the city bids fair to witness continued prosperity.

Prince Albert

Prince Albert is beautifully situated on the south bank of the North Saskatchewan river, a few miles above its junction with the south branch. It is located in the midst of a particularly good mixed farming country and with respect to the province as a whole occupies a more central position than any of the other six cities.

Prince Albert is one of the oldest centres of the province, and in its early days was headquarters for a number of river steamboats plying the waters of the Saskatchewan. It is now served by two railway companies, whose lines give direct connection with Winnipeg, Regina, Saskatoon, Battleford and beyond, as well as a thorough local service, including a branch line northerly to Big River, in the heart of the lumbering district. A joint railway and traffic bridge spans the Saskatchewan in front of the city and a network of roads and trails leads out in every direction.

The city's principal industry for many years has been lumbering, its mills giving employment to thousands of men and providing a market for vast quantities of farm produce. The output of sawn lumber from this city has reached a total of about 100 million board feet. The city is located in the midst of a rich farming district, noted for stock raising. There is an abundance of brick and pottery clay in the immediate vicinity, and extending northwards from the city there are large forests of spruce and poplar.

Among the public institutions is the Dominion penitentiary, located on its own farm adjoining the city boundaries. The Dominion Land and Timber Agent, Mining Recorder, District Forestry Inspector, Customs Officers and Provincial Police District Officers are also located here. The wholesale and retail houses and the hotels of the city are well in keeping with the best.

As an educational centre the city has excellent advantages. It has four public schools, a collegiate institute, a girls' school, a convent for the education of girls and an institute recently opened by the Presbyterian church for the training of Ruthenian boys. Two large hospitals are among the public buildings. The city is also noted for its fine churches. It is

the site of the Roman Catholic bishop's residence and the diocesan cathedral. The Anglican Pro-cathedral is also located here, and the Bishop of Saskatchewan makes his headquarters and residence in the city. The Presbyterians, Methodists, and Baptists have excellent churches.

The financial houses of the city include eight banks. The public utilities include the provincial government telephone system and municipal electric light and power and water service. During the past ten years the city has made vast improvements in its streets, parks, and buildings, till it is now a decidedly attractive residence centre with its hillside location overlooking the river and its substantial buildings attractively set off by a sprinkling of trees and shrubs. The population in 1921 was 7,558.

Swift Current

Swift Current is the third city of Saskatchewan located on the main line of the Canadian Pacific Railway. Its history dates back to the building of this first transcontinental line, and it has witnessed a steady growth. In 1914 it was granted incorporation as a city, and in 1921 the government census showed it to have a population of 3,518. For many years it was an important ranching centre and the shipping point for a large number of western cattle. During more recent years the ranching lands have been largely encroached upon by grain growers, and the district has proved a successful one for both ranching and farming.

The utilities are municipally owned and the advancement of the city generally is along most progressive lines. Some eighteen wholesale houses and five elevators are doing a large business. Its industrial concerns include a 200-barrel flour mill, cement products factory, aerated water factory, planing mill and creamery.

Among the business and educational institutions are found five banks, a high school, three public schools, a business college, land titles and judicial districts offices, a customs house and two newspapers. It has also five churches and a very creditable showing of substantial residences. Its distributive area embraces about 3,000 square miles of the southwesterly part of the province.

North Battleford

This new city has sprung up with astonishing rapidity on the north bank of the Saskatchewan river opposite the old historic town of Battleford, one time capital of the Northwest Territories. It is a divisional point on the Canadian National Railway and the distributing point for the great areas of farming and grazing lands extending northerly to the fertile valley of the Beaver river. Another line to the north of the river makes direct connection with Prince Albert. The city is built on a commanding site overlooking the Saskatchewan valley, and the bald prairies of the district give it an extensive view in every direction.

A very fine collegiate institute and a number of excellent schools are found. The churches, hospitals, and library are well in keeping with their usual high standing throughout the province. The city owns its electric light and power, water and sewerage systems and market. The population is now 4,108, double the number in 1911.

Weyburn

Weyburn occupies the most southerly and easterly location of any city of Saskatchewan, and lies in the heart of a prosperous farming community. The land about it has long since been all taken up and, as the acreage under crop has steadily increased, a great number of rural villages and towns have sprung up. The pioneer stage has passed and scientific and intensive methods of farming are making a most permanent and prosperous section about this centre, increasing the scope of its distribution and commercial and industrial activities.

It has also the additional advantages of being located in the lignite coal area, the deposits of which are now being utilized to great commercial advantage, especially in connection with clay working industries, which find an abundant supply of suitable raw material throughout the southern parts of the province. Its outlook for industrial expansion in these and other lines is most promising.

It was made a city in 1913 and its municipal policy has been active and progressive. Its utilities are quite up to the standard and are publicly owned. In financial, educational, and commercial matters it is in excellent condition. It offers inducements of no mean proportions to those seeking commercial or industrial opportunities as well as to those seeking a residence location. The population has increased from 103 in 1901 to 3,193 in 1921.

FORESTS

Although Saskatchewan is known as a prairie province, probably half of its entire area is more or less forested. The province is divided into three regions, of approximately equal area, occupying belts extending east and west.

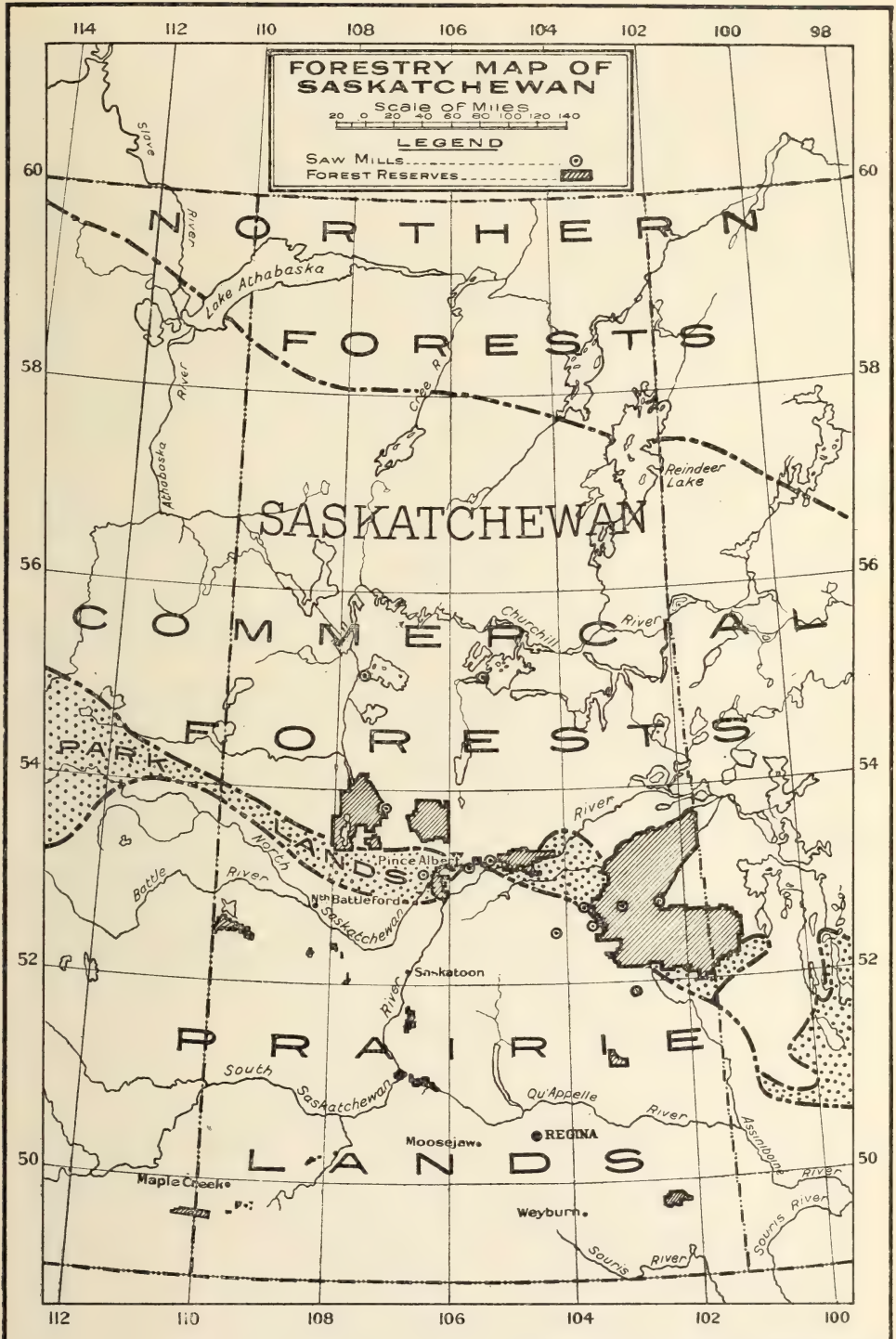
The southern belt is almost entirely prairie, and comprises the rich agricultural portion of the province which is so widely known. North of the prairie lies a belt of forest averaging 350 miles in width, and farther north is a region of open tundra interspersed with limited areas of tree growth, which though valuable for local supplies of wood, are not extensive enough for commercial exploitation.

Between the prairie and the forest belt there is a transition zone, locally known as the "bluffy country," where prairie and forest are intermingled, but the land for the most part is agricultural, and the forests will of necessity give way to the advancing settlement.

In the true forest belt, however, very little of the land could be successfully farmed, and the permanent dedication of this area to forestry offers the only productive utilization of the land. The greater part of the area included in the forest division lies in those northern parts where neither the forest products nor the soil can be considered of any particular value. Of the entire prairie division the percentage that might be termed first class agricultural lands is high, probably easily 90 per cent, while that of the forest division which could be rated as commercially valuable is low, possibly not over 25 per cent. In the cold and rocky regions of the northern parts of the province, where the woods are inferior and inaccessible and the possibilities of agricultural development are out of the question, the real value of the forest is in connection with its advantageous influence on game and fur-bearing animals. Useless as a commercial asset, the scrubby forest of the north makes an ideal preserve for animals and supplies a sufficient quantity of shelter and fuel for the requirements of the few traders, trappers and prospectors, both whites and Indians, who inhabit those regions. Except for a limited quantity of merchantable timber in the valley of the Clearwater river and about the shores of Lake Athabaska, the district north of the Churchill river may be included in this description.

Saskatchewan's area of valuable merchantable timber might be roughly described as comprising a belt extending from east to west across the central part of the province, bounded on the north by the Churchill river and extending southerly to Prince Albert on the Saskatchewan river. From Prince Albert it extends in a southeasterly direction and reaching below the Saskatchewan river to the eastern boundary of the province, while in the western part of the province it barely reaches as far south as this river. Within this belt are found such large rivers as Saskatchewan, Carrot, Torch, Sturgeon and Beaver, also Cumberland, Amisk, Candle, Montreal, Smoothstone, Doré, Cold, and Primrose lakes, Lac la Ronge and Lac la Plonge, on the lowlands surrounding which the heaviest timber is found.

NOTE.—Data for this section was supplied by the Forestry Branch, Department of the Interior.



This area has been only partially surveyed, and the extent of the timber has not been determined with any degree of accuracy.

Though there are over 100,000 square miles of land within the wooded portion of Saskatchewan, a considerable proportion of the area is occupied with muskeg or has suffered so severely from repeated fires that the actual forested area probably does not now exceed 50,000 square miles.

Owing to the prevalence of forest fires in the past, the forests of Saskatchewan are for the most part young, though of great potential value. On only one quarter of the forest area has the timber attained sufficient size for pulpwood. The saw timber is confined to about 5,500 square miles.

The total amount of timber of merchantable size in the province is estimated to be 82,500 million feet board, of which about 10 per cent is of saw-timber size. Of the total stand, 56,000 million feet is softwood or coniferous timber, chiefly spruce and jackpine, and 26,500 million feet is deciduous species, chiefly poplar. Of the principal species used in the manufacture of pulp and paper (spruce and balsam), it is estimated that there are 31 million cords and, in addition, there are 117 million cords of jackpine and poplar, the use of which is increasing.

Spruce is undoubtedly the most valuable species in the province. There are approximately three billion feet of this wood suitable for the manufacture of lumber, and an additional 22,500,000 cords of pulpwood.

Jackpine is almost as important, though only 800 million feet is of saw-timber size, but there is a large amount, estimated to be upwards of 75 million cords, which can be used for railway ties, mine props, pulpwood or fuel.

Of the other coniferous species, balsam-fir and tamarack are of some importance, there being probably 2 million cords of each, a small proportion of which could be used for lumber.

Of the various species of poplar, of which aspen is the most abundant, there are estimated to be 38 million cords, of which perhaps 400 million feet board measure might be manufactured into lumber. The balance is of value for fuel, fencing and pulpwood.

In some places there is considerable white birch, which is chiefly valuable for fuel.

The forest industries have not been extensively developed as yet, but in 1920 there were 27 sawmills in operation. There are no pulp mills in the province, and the distance from existing plants has precluded the utilization of the pulpwood resources.

Species and Occurrence

The forest species of Western Canada, particularly of the Prairie Provinces, are much less numerous than those of Eastern Canada. This applies to both coniferous and deciduous varieties, especially the latter. However, in Saskatchewan some 20 odd species of trees are to be found, though the number of valuable woods included in the list is small. Only about six or seven species are of commercial value and about four of these are suitable for the manufacture of lumber. In fact, only the white spruce can be classed among the leading commercial timbers of the world, but fortunately it is widely distributed, fairly plentiful, and grows to perfection in these districts. The species found in the province are shown in the following table:—

TREES FOUND IN SASKATCHEWAN

Alder (<i>Alnus</i>)	Cottonwood, Narrowleaf (<i>Populus angustifolia</i>)
Ash, green (<i>Fraxinus pennsylvanica</i> var. <i>lanceolata</i>)	Elm, White (<i>Ulmus americana</i>)
Ash, Mountain (<i>Pyrus americana</i>)	Fir, Balsam (<i>Abies balsamea</i>)
Aspen (<i>Populus tremuloides</i>)	Maple, Manitoba (<i>Acer Negundo</i>)
Birch, Alaska (<i>Betula Alaskan</i>)	Oak, burr (<i>Quercus macrocarpa</i>)
Birch, White (<i>Betula alba</i> var. <i>papyrifera</i>)	Pine, Jack (<i>Pinus Banksiana</i>)
Cedar (<i>Thuja occidentalis</i>)	Poplar, Balsam (<i>Populus balsamifera</i>)
Cherry, Bird (<i>Prunus pennsylvanica</i>)	Spruce, Black (<i>Picea mariana</i>)
Cherry, Choke (<i>Prunus virginiana</i>)	Spruce, White (<i>Picea canadensis</i>)
Cottonwood (<i>Populus deltoides</i>)	Tamarack, (<i>Larix laricina</i>)
	Willow (<i>Salix</i>)

Fires have played great havoc with the forests of the province and only comparatively small areas of virgin timber are to be found. Extensive fires are known to have occurred about 50 years ago, while many large areas in the central part of the province have been partially burnt over every 15 or 20 years. Were it not for the destruction wrought by these fires the timber supply would be much greater than it is.

Remarkable success has been achieved by certain countries that have given serious attention to the commercial exploitation of their forests on a scientific basis, having regard to the future supply as well as to the present. The case of Sweden is worthy of examination. Sweden's forest areas are about the equal of those of Saskatchewan, and the climatic and soil conditions are very similar. By an extensive forestry enterprise, under government control, the annual value of her forest products has been made to exceed one hundred million dollars. There is no real reason why Saskatchewan should not emulate the example of this enterprising nation.

In the survey of the Pasquia Hills and Carrot river regions the white spruce is found to be confined mainly to the high lands of the plateau and the dry regions and knolls of the Carrot river plain, and is well adapted to the boulder clay soil and the climate of these regions. It is generally found in a mixture with the poplar. The black spruce is found almost entirely in low, wet situations, the muskeg type being usually very stunted. It also grows on the eastern base of the Pasquia hills. Jack-pine flourishes on sandy ridges and knolls and reproduces with a most surprising rapidity following fires. Tamarack is found mixed with black spruce in swamps and muskegs but has been the prey of forest insects, which have nearly annihilated the species. Paper birch and white birch are well distributed and grow to a large size on Carrot and Fir rivers. Scattered specimens of balsam fir are found on the banks of Carrot river. Elm and green ash are found on the soft, alluvial mud banks of Carrot river, while Manitoba maple and mountain ash are scattered on the high lands. Willows and alders are found on nearly all wet river flats.

In the Cumberland lake district there is a limited supply of white spruce, restricted to the well-drained tracts of flat land, averaging in size from 12 to 26 inches diameter, breast height. The muskegs and low wet lands produce a scattered supply of black spruce, while on the limestone ridges and sandy soils a coarse growth of jackpine is found. On Red-willow river, near its junction with the Carrot, blocks of white spruce have been examined which will average from 10 to 15 thousand board feet per acre. North of Torch river and between Candle lake and the Sturgeon-Weir river there are said to exist extensive areas of white spruce and jackpine. The many lakes and rivers found throughout the wooded

part of the province and numerous water powers available on the Churchill and its tributaries and on the Sturgeon-Weir will make the driving and manufacturing of the forest products a practical possibility.

The following statistics of the lumbering industry in Saskatchewan show the conditions for the year 1920:—

The amount of capital invested in the lumbering industry in Saskatchewan is given under two heads, (a) forest operations and (b) mill operations for the various items of capital. The total capital employed in 1920 amounted to \$2,040,767, while in 1919 it stood at \$1,493,753, or an increase during the year of \$547,014.

(QUANTITY AND VALUE OF LUMBER, SHINGLES AND LATH CUT, 1916-1920 INCLUSIVE

Lumber

Year	M.Ft.B.M.	Value	Average value per M.Ft.B.M
		\$	\$
1916.....	84,275	1,189,351	14.11
1917.....	88,375	2,036,028	23.04
1918.....	75,835	2,122,307	27.98
1919.....	42,452	2,326,688	31.25
1920.....	54,371	2,074,621	38.16

Shingles

	M.	\$	\$
1916.....			
1917.....	20,695	73,265	3.54
1918.....			
1919.....			
1920.....	1,803	9,105	5.05

Lath.

	M.	\$	\$
1916.....	25,061	36,768	1.47
1917.....	176	777	4.41
1918.....	17,244	73,490	4.26
1919.....	7,856	41,425	5.25
1920.....	13,025	101,199	8.00

LUMBER PRODUCED IN SASKATCHEWAN, YEAR 1920

Kinds of wood	Quantity in M. ft. B.M.	Value	Average value per M. ft.
		\$	\$
Spruce.....	53,268	2,034,524	38.19
Tamarack.....	628	23,120	36.82
Jack Pine.....	396	13,907	35.12
Poplar.....	79	3,070	38.86
	54,371	3,074,621	38.16

QUANTITY AND VALUE OF LUMBER, SHINGLES AND LATHS, 1920—SUMMARY

M.Ft.B.M.	Value	Average value per M.Ft.B.M.
	\$	\$
Lumber—54,371.....	2,074,621	38.16
Shingles—1,803.....	9,105	5.05
Lath—13,025.....	104,199	8.00
Total value of season's cut.....	2,187,925	

Forest Operations 1920—

Logging camps and other buildings.....	\$ 7,770
Machinery and tools.....	8,500
Horses, sloops, wagons and other equipment.....	6,600
Supplies on hand for keep of men and horses.....	10,690

Total capital in forest operations..... \$ 33,490

Mill Operations—

Land and buildings.....	31,000
Machinery, tools and equipment.....	163,418
Material on hand, stock in process, etc.....	504,484
Cash, trading and operating accounts, etc.....	1,308,375

Total capital in mill operations..... \$2,007,277

The number of persons employed in the industry during 1920 was 794, and the total amount of salaries and wages paid was \$1,004,804.

SAW MILLS IN OPERATION 1921 AND 1922

Albert, J. B.....	Prince Albert	Miller, J. W.....	North Battleford
Anderson, H.....	Paddling Lake	Nadon, Theo.....	St. Hippolyte
Barnett, R. G.....	Strong Pine	Nugent, Andrew.....	Steep Creek
Blackburn & Hasselfield.....	Bannock	Prince Albert Lumber Co. Ltd.....	Prince Albert
Cunningham, A. H.....	Tisdale	Saskatchewan Lumber Co. Ltd.....	Crooked River
Degerness, Carl.....	Kelvington	Shaw, Chas.....	Bjorkdale
Egeland, H. N.....	Canwood	Simpson, A. J.....	Eldersley
Emele, Henry.....	Sturgeon River	Studlin Bros.....	Hazel Dell
Hawke, E. & Son.....	Hudson Bay Junction	Thompson, D. J.....	Park Side
Hodgson, L.....	Dahilton	Turnbull and Barnum.....	Peesane
Hornseth & Jacklin.....	Ravine Bank	Wahl and Johnson.....	Shellbrook
Joyce & McKechnie.....	Chagoneess	White Poplar Lumber Co.....	Mistatim
McDonald, D. N.....	Mistatim	Young, James.....	Invermay
Meeks, D. S.....	Forrester		

The industry, while of small size, has proved a boon in many ways, providing lumber and lath for local use, in giving work to homesteaders during the winter months, and in opening up many new agricultural sections adjacent to the heavier woods. There are still large tracts of standing timber of good mill dimension which will guarantee several years cut. The commercial practice of forestry will keep up a yearly supply of limited quantity. The evolution of the frontier sawmill, however, into a plant of more detailed wood-working nature, including the making of pulp, is necessary to maintain its industrial growth and development.

Forestry

The forests are administered by the Dominion Government. During the season of fire hazard, patrols are maintained by the Forestry Branch throughout the forested area and, as a result, much valuable timber has been saved from destruction. The enormous areas of young timber which have become established since protection from fire has been afforded attest the value of this service. During the last two years air-craft have been

employed in the detection and extinguishing of forest fires, with great success.

Large areas of non-agricultural forest lands have been permanently withdrawn from settlement in the form of forest reserves. These are administered by the Forestry Branch of the Department of the Interior, and the reserves in Saskatchewan are under the direct supervision of the district forest inspector at Prince Albert.

The Saskatchewan Forestry Branch Inspection during 1922-23 included 1 district forest inspector, 1 assistant district forest inspector, and the necessary clerical staff.

The staff in charge of the forest reserves included 3 forest supervisors, 4 foresters, 5 assistants, and 48 forest rangers of different ranks. The fire-ranging outside of the Reserves was conducted by fifty-one rangers.

The forests outside of the forest reserves are administered by the Timber and Grazing Branch of the Department, of which the various Dominion Lands Agents are the local officers.

LIST OF FOREST RESERVES

Reserve—	Area (sq. miles)
Moose Mountain.....	156.00
Beaver Hills.....	99.00
Porcupine No. 2.....	2,870.25
Pasquia.....	2,615.00
Fort a la Corne.....	513.00
Steep Creek.....	7.00
Pines.....	164.56
Nisbet.....	149.49
Sturgeon.....	729.00
Big River.....	1,342.00
Seward.....	30.75
Elbow.....	119.00
Dundurn.....	63.25
Keppel.....	86.25
Manito.....	179.65
Duck Mountain No. 2.....	81.00
Cypress Hills No. 2.....	97.00
Total.....	9,302.20

The use of the name "reserve" is unfortunate, in that it conveys the impression that the resources of these areas are withheld from utilization, while the opposite is the aim of their establishment. These lands are reserved only in the sense that they are to be administered with the view of utilizing to the fullest extent the productive value of the land. Care has been exercised to eliminate areas capable of agricultural development, and every facility is afforded the settlers to utilize the supplies of wood, grazing facilities and recreational possibilities of the reserves. Large amounts of wood are furnished free to settlers and in some cases nominal fees are charged for the material taken out of the reserves. When conditions warrant, timber is sold to operators under regulations which have in view the perpetuation as well as the use of the forests.

During the fiscal year 1920-21, 761 free permits and 1,072 paid permits were granted in the forest reserves in Saskatchewan under which the following amounts of wood were cut: Poles, 75,195 pieces; posts, 271,537 pieces; railway ties, 11,230 pieces; saw timber, 1,163,063 bd. ft.; building logs, 178,448 lin. ft.; fuel, green, 1,118 cords; fuel, dry, 31,447 cords. The revenue derived from these permits was approximately \$13,000.

Five timber sales previously granted were in operation in that year and eleven new sales were made. The total cut under these sales during the year was 4,100,369 board feet.



Standing Timber, Porcupine Forest Reserve.

During the same year 968 grazing permits and 415 permits to cut hay were granted in the reserves; 47,797 head of stock, comprising 29,447 cattle, 8,803 horses and 9,547 sheep were grazed, and 13,793 tons of hay cut. The grazing dues amounted to \$21,208.73 and the revenue from hay \$3,906.45.

The public is encouraged to use the reserves for camping and other forms of outdoor recreation. Camp sites are leased and roads and trails are maintained to facilitate travel in the woods. Staffs of rangers are employed on these reserves to protect the forests from fire and to supervise the cutting of timber and other uses of the forest.

Sale of Timber.—On Dominion lands the timber is disposed of under licenses to cut, the Government retaining the title to the land.

Timber Licenses.—These are granted on lands not included in reserves. They are renewable annually as long as there is merchantable timber on the land and the land is not required for agriculture or other purposes, and are subject to such regulations as may be made from year to year. They are sold by public competition to the person offering the highest cash bonus. A ground rent of \$5 per square mile and a royalty of 50 cents per thousand board feet (see Crown Timber Regulations) are charged, payable as and when the timber is cut. A charge varying with the expenses incurred is made for fire protection. This is usually between one and two cents per acre per year.

Timber Sales.—These are granted in forest reserves. The cutting rights are limited to a definite period, usually not over five years. They are sold at public competition to the person offering the highest stumpage price, which is collected as the timber is cut. A cash deposit amounting to ten per cent on sales of less than \$5,000 and five per cent on sales over \$5,000 is required to insure fulfilment of the contract.

Tree Planting

The subject of tree planting on the prairies is receiving increased attention as the benefits therefrom arising are becoming better known. Both the Provincial and Federal Governments are interested in making known to the public the great value which even small plantings of trees have for the farmer.

It is impossible to say what the exact causes were which prevented the growth of trees on the prairies, but evidence shows that some districts now treeless were at one time well timbered. Undoubtedly the chief agency preventing tree growth was the frequently recurring prairie fire, and it is well known that, if fires are kept out of a district for a number of years, small bluffs of poplar spring up around the sloughs and low places, which if undisturbed soon become well timbered districts. Immense tracts of land now only partly utilized will be used to the fullest advantage after protection is afforded by plantations of trees. There are several ways in which the planting of trees will benefit the prairie settler.

1. They provide shelter from the winds to crops, buildings and stock. Observations made by the superintendent of the tree planting division at Indian Head have led to the conclusion that the protective influence of a belt of trees on the adjacent growing crops amounts to about 50 feet in width for every foot in height of the trees; that is, a row of trees 15 feet high will give a valuable shelter for 750 feet out into the adjoining grain fields. Farmers whose fields contain various clumps of trees recognize their value as winter shelter and, in threshing the grain, arrange to have the straw piles placed on the south sides of such clumps. Here during the coldest days of winter the cattle may be found feeding and contented. The injury caused by soil-drifting in some districts has shown the necessity of growing wind-breaks as protection for grain fields.

2. Trees collect and hold the snow during the winter, preventing it from banking up around buildings.

3. They preserve and retain the moisture in the soil by breaking the force of the hot winds in summer, thus retarding evaporation. Snow held by the trees during winter melts more slowly in the spring, thus retaining the moisture.

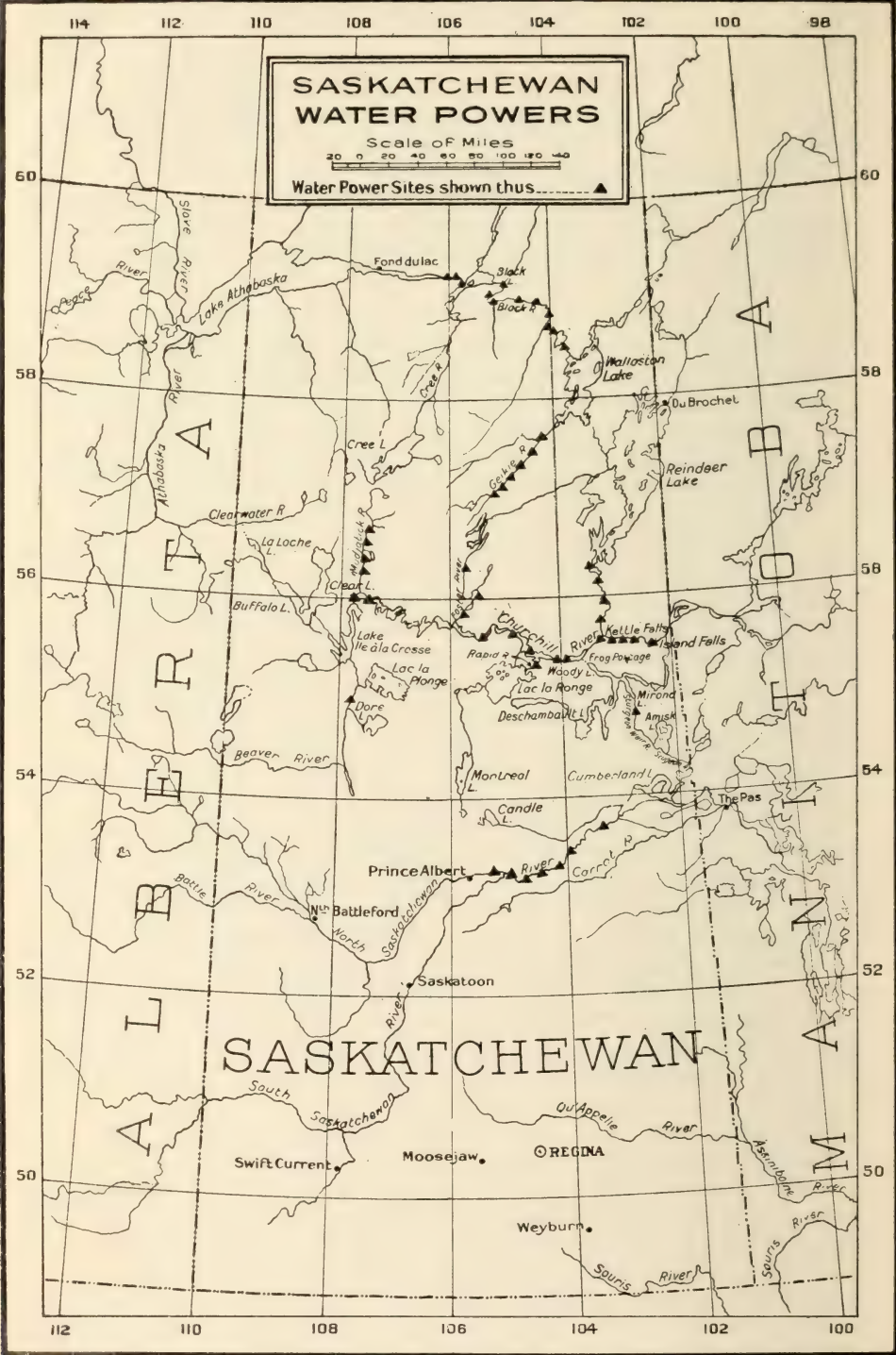
4. Plantations will supply fuel, fencing material, and wood for repairs. This is a matter of great importance to settlers who live at long distances from wooded areas. It is quite possible for almost any settler on the plains to develop his own wood lot.

5. Groves of trees not only have an aesthetic value in beautifying the landscape and home surroundings, but they have a decided money value, for any farm with a productive wood lot is far more valuable than one without trees.

In supplying wood for fuel tree plantations can be made quite profitable. The coarser varieties, such as Russian poplar, grow very rapidly, and six years after setting out an acre of young shoots a summer's supply of stove wood can be cut. Other varieties will provide fence posts and poles, which are always in demand on a farm, but will require longer to develop. However, it is possible, in the majority of cases, by planting two or three acres of a mixture of varieties of western trees to secure in ten or fifteen years a permanent source of supply of fire wood, poles, and posts sufficient to meet the ordinary requirements of the farm from year to year. The initial expense is small though it entails considerable work, but the time saved when returns come in more than repays the trouble. Railway companies have found that the planting of shrubs as wind-breaks along their right-of-way to stop the snow from drifting over the tracks has proved a success. Rural municipalities will find that beneficial results can be obtained by protecting roads in the same manner, also in retaining embankments and in beautifying the landscape.

The Forestry Branch maintains a tree planting division at Indian Head and Sutherland, under the charge of resident superintendents. During the planting month, May, seedlings of broad-leaved stock were distributed in 1920 to the number of 3,250,000 to about 8,000 applicants, and the material available for distribution from the nurseries at Indian Head and Sutherland in the spring of 1921 comprised 6,464,000 seedlings. Every indication points to an increased demand for tree planting material.

There are on almost any farm certain portions of land which are not used for grain growing, such as low places difficult to drain, or steep banks of coulees, or rough stony places. Tree planting would convert such idle land into revenue-producing. Every acre could be profitably cultivated on the majority of farms.



WATER POWERS

The population of Saskatchewan and its commercial and industrial life is at present almost wholly located in the prairie, or southern portion of the province, there being no cities or towns and very few settlements north of the North Saskatchewan and Saskatchewan rivers. This has an important bearing on the development of the provincial water-power resources.

The greatest natural resource of Saskatchewan lies in its soil; this province being the largest grain-producer in Canada. Forestry, coal, minerals and water-power form other natural resources awaiting exploitation. The water-powers are situated chiefly in the northern section of the province and their distance from the present centres of population renders their early development more feasible in conjunction with the development of the other nearby natural resources rather than for the purpose of transmission to present industrial centres. The further settlement of the province, and particularly the development of its northern territory, assure a full future utilization of the extensive water-power resources available. At the present time the development of one or two power sites on the northern rivers is contemplated in conjunction with the development of the mineral belt of Northern Saskatchewan and Manitoba.

Engineers of the Dominion Water Power Branch of the Department of the Interior have investigated the power possibilities of all the more important power rivers within the range of early prospective development, including the North Saskatchewan and Saskatchewan rivers, the Sturgeon-Weir river, and the Kettle Island and Bloodstone falls sites on the Churchill river. It is the policy of this branch to progressively and systematically continue these investigations and study the power possibilities of each stream, so that accurate data in each district may be available when required, and the exploitation of natural resources be not retarded by the lack of complete basic information.

The lack of stream flow and power data in the northern portion of the province makes it impossible, at the present time, to completely and finally compile the water-power prospects in a satisfactory manner. An estimate of the undeveloped powers of the province has, however, been made from all data available by the Dominion Water Power Branch, and was published in the annual reports of that branch for 1917-18, 1918-19. For more detailed data regarding any particular river or power site, application should be made to the Director of Water Power.

The following table summarizes the water-power available in Saskatchewan, but is subject to revision as later data become available:—

NOTE.—Data for the section on water-power were compiled by the Dominion Water Power Branch Department of the Interior, Ottawa.

SUMMARY UNDEVELOPED WATER-POWER, SASKATCHEWAN

River	Horse-power at 80% efficiency		Remarks
	Ordinary minimum development	Estimated maximum development	
Beaver.....	785	2,300	Grand Rapids
Black.....	72,559	217,902	
Churchill.....	255,870	358,100	
Foster.....	906	2,728	
Geikie.....	2,450	7,359	
Mudjatic.....	575	1,732	Cole Falls 20,000 H.P. with Churchill diversion
Rapid.....	5,927	15,750	
Reindeer.....	93,070	106,560	
North Saskatchewan.....	3,439	14,880	
Saskatchewan.....	72,240	350,750	
Sturgeon-Weir.....	5,660	9,695	
	513,481	1,087,756	

MINERALS

The mineral resources of a country may be classified under two distinct headings, namely, metallic and non-metallic. Under the non-metallics are sometimes directly included such materials as sand, clay, stone and similar substances and their manufactured products. These may not appear at first in the popular sense as "minerals," yet they are technically rocks and belong to the mineral kingdom, and are rightly classed as non-metallics. It has become a common practice, however, to make a separate division of such non-metallic products, and classify them under a third heading as "structural materials and clay products." The minerals of Canada may therefore be classified under these three headings.

The total value of the mineral production of Canada for the year 1922 was \$183,029,595. In 1906 it was about \$80,000,000, in 1896 about \$22,500,000, and in 1886 only slightly over \$10,000,000.

The province of Saskatchewan, however, has played but a small part in the mineral production of the Dominion. Farming, not mining, has been her forte, and her fields of golden grain have been the means of bringing more wealth to her people at large than many gold fields have ever accomplished. Mining has received as yet but little attention in this province. A general opinion has gone abroad that the prairies and mineral resources are not to be considered together.

When settlement spread over the prairies, the necessity of securing fuel arose, and the lignite coal fields of the southern part of the province were discovered and opened up. When towns and cities began to grow, building material became an urgent necessity, and forthwith the clays of the province were found to be admirably suited for the making of brick. Fuel from the non-metallic products division and brick from the structural materials and clay products division constitute Saskatchewan's share in mining activity to date. This represents only a small share of the total for the Dominion. For the year 1922 the value was \$827,645, or 0.45 per cent of Canada's total. The following table shows the value of the yearly mineral production for the province of Saskatchewan and for the whole of Canada from 1910 to 1922:—

MINERAL PRODUCTION

Year	Saskatche- wan	Canada	Year	Saskatche- wan	Canada
	\$	\$		\$	\$
1910.....	498,122	106,823,623	1917.....	860,651	189,646,821
1911.....	636,706	103,220,994	1918.....	1,019,781	211,301,897
1912.....	1,165,642	135,048,290	1919.....	1,521,964	176,686,390
1913.....	881,142	145,634,812	1920.....	1,837,468	227,859,665
1914.....	712,313	128,863,075	1921.....	1,114,220	171,923,342
1915.....	451,933	137,109,171	1922.....	827,645	183,029,595
1916.....	59,473	177,201,534			

The limited mineral production of Saskatchewan should not be considered indicative of an absence of minerals in the province, for the great northern hinterland, lying well within the edge of the Cambrian pene-

plain, may yet reveal deposits of value, similar to those discovered within the limits of northern Manitoba. On the west unlimited stores of coal, oil, gas, tar and other mineral products have been found in Alberta, and similar geological formations in Saskatchewan may be expected to reveal similar products.

The minerals of Canada offer a wide range for the prospector. In addition to the non-metallic products, which so far have constituted the extent of Saskatchewan's output, are many valuable metallic ores, the presence of which in greater or lesser quantities are known to exist in the northern part of the province. The following table contains a list of all the minerals of Canada recently produced in commercial quantities. Those found in Saskatchewan are indicated by a single asterisk in case of prospects or undeveloped deposits, and by a double asterisk where commercially utilized.

MINERALS OF CANADA

I. <i>Metallic Ores</i> —		
Aluminium	*Iron	Platinum
Antimony	Lead	Palladium
Cobalt	Mercury	*Silver
*Copper	Molybdenum	Tin
*Gold	Nickel	Tungsten
II. <i>Non-metallic Products</i> —		
Abrasive materials:	Chromite	Zinc
Corundum	**Coal	Mineral pigments:
Grindstone	**Coke	*Ochres
Tripolite	Feldspar	*Mineral water
Actinolite	Fluorspar	*Natural gas
Alunite	Graphite	*Peat
Pyrophillite	*Gypsum	*Petroleum
Arsenic	Magnesite	Phosphate
Asbestos	Manganese	Pyrites
Barytes	Mica	*Quartz
		**Salt
		Talc
III. <i>Structural Materials and Clay Products</i> :—		
*Cement	*Pottery	**Sand-lime brick
Clay products:	**Sewerpipe	**Sand and gravel
**Brick	**Tiles, etc.	*Slate
**Fireclay	**Lime	**Stone

Economic Geology

Before a search for minerals can intelligently be made a general knowledge of the geology of the district in which such search is proposed is advisable. The geologist, the prospector and the miner must work in the order named. Geological explorations and examinations of various parts of the province have been made by a number of officials of the British and Canadian Governments at periods extending over the past sixty years. Prior to the acquisition of Prince Rupert's Land in 1870 by the Dominion, the lands now comprising this province were directly under the control of the British Government, who sent out a few geological expeditions to report thereon. Since 1870 the mineral resources of the West have remained under the control of the Federal Government at Ottawa. Under their direction several members of the Geological Survey of Canada and of the Mines Branch have carried on the work, and their reports constitute practically our entire knowledge of the geology of this province. The University of Manitoba has a Department of Geology and Mineralogy, and provides extension classes in elementary studies of these subjects for prospectors and miners. The publications of the Federal departments at Ottawa are augmented by various pamphlets issued locally and a campaign of newspaper publicity has also been enlisted.

In 1873-74 G. M. Dawson was attached to the British North America Boundary Commission as naturalist. His *Report on the Geology and Resources of the Forty-ninth Parallel from the Lake of the Woods to the Rocky Mountains* is an exhaustive treatise on the physical geography and geology of the district covered.

The investigations of the Geological Survey of Canada, and later of the Mines Branch of the Department of Mines, constitute a wealth of information pertaining to the geology of the Prairie Provinces. In fact, so far as Saskatchewan is concerned, such reports are practically the only literature available pertaining to such studies.

Among other reports issued by the Geological Survey of Canada may be mentioned, in chronological order, those compiled by the following geologists A. R. C. Selwyn, R. W. Ells, G. M. Dawson, Robert Bell, J. B. Tyrrell, D. B. Dowling, William McInnes, H. Ries, J. Keele, Bruce Rose, N. B. Davis, F. J. Alcock, and W. A. Parks.

The investigations of these various geologists, covering a period of some sixty years, have determined to a considerable extent the degree of economic value that may be attributed to the mineral deposits of the province and have given the world a knowledge of its geological features. Reports of this work are available to those interested by making application to the Geological Survey of Canada, or to the Mines Branch of the Department of Mines, Ottawa.

Coal

The known coal deposits of Saskatchewan are of the lignite variety only. The chief output comes from the vicinity of Estevan, located on the Souris river, near the south-eastern corner of the province. Other deposits exist for 75 or 100 miles along the Souris river, for over 75 miles in an easterly and westerly direction in the Willowbunch-Wood Mountain district and on the South Saskatchewan river about 100 miles southwest of Saskatoon. Small outcrops are reported at various points throughout the province. Rumours of deposits of a better grade coal in the northern parts of the province, at Lac La Ronge, which is just south of the Churchill river, have been confirmed.

In his report on the coals of Saskatchewan Dr. D. B. Dowling, of the Geological Survey of Canada, who is recognized as a leading authority on the coal situation of Western Canada, gives the following information: "The area that is best known is the vicinity of Estevan on the Souris. Mining has been carried on here for several years. The seams are found exposed on the river banks, and located elsewhere by boring. An 8-foot seam is mined, though on some of the properties, near Bienfait, this is thickened up to 15 feet. Over a large part there are, per section, at least 7,000,000 tons of lignite available. Eight townships of this vicinity would, therefore, have a possible 2,000 million tons. Coal will be found north to near Weyburn station, and west of this outcrops have been recorded on the Souris, in township 3, range 15. Along the International boundary, in about the same longitude, seams are exposed on Big Muddy creek, draining Willowbunch lake. These are of low grade lignite, and the seams are, respectively, three feet and five feet in thickness. At the crossing of Poplar river, in township 1, range 29, west of the second meridian, there is an exposure of an 18-foot seam of lignite of about the same quality of coal as that at Souris river.

"Near the old Mounted Police post at Wood mountain, seams of six and five feet, respectively, have been opened, and have proved good domestic fuel. The same may be said of exposures at Willowbunch settlement. West of this the lignite beds underlie portions of the Swift Current plateau. In the Cypress hills, a 4-foot seam is recorded at the head of Lodge pole creek; so that, with the scattered areas in which coal seams have been found, exclusive of the Souris area, there are nearly 4,000 square miles on which there is good chance of finding coal. This area is capable of producing for every foot thickness of coal worked 3,720 million tons, which, with the smallest workable thickness of 4 feet, means 13,000 million tons."

The annual consumption of coal in the province is about 1,500,000 tons, while the annual output is in the neighbourhood of 350,000 tons. The province imports little from the United States, but regularly receives from 1,000,000 to 1,500,000 tons from the west, principally from Alberta.

The annual production of coal in Saskatchewan from 1910 to 1921 is shown on the following table:—

Year	Short tons	Value	Year	Short tons	Value
		\$			\$
1910.....	181,156	293,923	1916.....	281,300	441,836
1911.....	206,779	347,248	1917.....	355,445	662,451
1912.....	225,342	368,135	1918.....	346,847	722,148
1913.....	212,897	358,192	1919.....	379,347	819,390
1914.....	232,299	374,245	1920.....	335,222	797,828
1915.....	240,197	365,246	1921.....	335,632	823,180
Total 1910 to 1921.....				3,332,463	6,373,822

Mines Branch, Department of Mines, Ottawa.

The output by principal collieries (average of 500 tons or over per month) in Saskatchewan for the years 1919, 1920, and 1921, is shown in the following table:—

Collieries	1919	1920	1921
	Short tons	Short tons	Short tons
Bienfait Commercial Co., Ltd.....	41,718	41,263	28,979
Bienfait Mine.....	68,472	65,440	44,927
Crescent Collieries, Ltd.....	12,341	35,213	35,801
Estevan Coal and Brick Co., Ltd.....	10,595	6,263	6,495
Manitoba and Sask. Coal Co., Ltd.....	67,473	46,291	57,165
Nicholson, H.....	7,251	3,518	5,416
Shand Coal and Brick Co.....	10,506	17,407	14,285
Western Dominion Collieries, Ltd.....	115,584	91,875	108,712
Sask. Coal, B. and P. Co.....	11,138		
All other operators.....	34,269	27,952	33,852
Total for Saskatchewan.....	379,347	335,222	335,632

Mines Branch, Department of Mines, Ottawa.

The shipments of coal from the mines of Saskatchewan in 1921 were as follows:—

Destination	Short tons
Saskatchewan.....	153,308
British Columbia.....	2,197
Manitoba.....	153,383
Ontario.....	374
United States.....	354
Railroads.....	303
*Total.....	309,919

Coal in small quantities is also mined for local use in various places, chiefly by farmers during the winter months. The mines or pits are located on the sides of ravines where coal outcrops occur. The overburden is stripped off and the lignite dug out and hauled away. After digging a few feet into the bank the overburden becomes so thick that the labour of removing it is out of proportion to the value of the fuel recovered. Another site is then selected and the former abandoned.

Regarding the Wood Mountain-Willowbunch coal area, Dr. Rose, who has made an exhaustive study of its condition, says: "The lignite occurs in flat-lying beds interstratified with clays, sands, and shales. The beds vary in thickness from one inch and less to more than 20 feet. Outcrops are found along the sides of coulees and abandoned river channels. It is not possible to trace the beds for any great distance, as they are in most places covered with soil and grass and, owing to the mode of their deposition in shallow lakes and swamps, they form, with the clays, sands, and shales, a series of interfingering lens-shaped deposits."

Lignite is a low grade fuel, on account of its moisture content, and one of its greatest faults is its inability to retain its original form for any length of time after being mined. On exposure to the air a great deal of its moisture evaporates and it slacks almost to a powder. Attempts have been made to overcome this difficulty as well as to devise other more economical ways of utilizing lignite. Investigations have been conducted co-operatively by the Federal government and the governments of Saskatchewan and Manitoba with considerable success. The possibility of carbonizing and briquetting the lignite appears feasible. This will simplify the shipping and storing and make an economical and easily handled fuel. Gas producer tests of Souris coals have shown them to be a very suitable fuel for this purpose and easily worked. This makes it a desirable fuel for power purposes, the process converting it from a low grade to a high grade fuel in convenient form. If these processes can be put into general commercial practice, as indications now suggest, it will revolutionize the coal situation of Saskatchewan. Her vast fields of lignite, now considered of secondary value, will become a tremendously valuable asset. For heating purposes alone and as an incentive to industrial undertakings, to the adjacent clay-working industries, for instance, it will prove of inestimable value. The solving of the shipping and storing problem will open up markets beyond the limits of the province itself.

Clay

Among other questions to be considered in connection with contemplated clay-working industries, the following call for special attention: Material available, ease of recovery or mining, fuel for burning, transportation, and markets. The investigations of government experts prove that Saskatchewan's wealth in raw material for this industry is unlimited. It is pointed out, however, that many clays have defective qualities, and that thorough laboratory tests should be made to ensure the quality before final location of a plant is determined upon. Suitable raw material, though plentiful, is not easy to determine without such thorough tests. The principal investigations of the clay areas of the province have consisted of preliminary economic surveys by H. Ries and Jos. Keele, general geological work by Dr. Rose in the Wood Mountain-Willowbunch coal district, and field investigations and laboratory tests of clays south of the 51st parallel by N. B. Davis. Some one hundred and sixty samples of clay were collected by Mr. Davis during the summers of 1915-16 and tested in the ceramic laboratory of the Mines Branch, Ottawa, during the following winters under the direction of Jos. Keele, Chief Ceramic Engineer. In introducing Mr. Davis' report on these investigations, Mr. Keele writes: "Its publication is a further contribution to our knowledge of the economic minerals of Canada, and may be deemed specially opportune at the present time, when the commercial demand for refractory materials is—and has been for years past—altogether in excess of the supply. The greater part of the supply was obtained from foreign sources. The province of Saskatchewan excels in the quality and quantity of that class of raw refractories known as fireclays; and in addition to this valuable material, possesses other argillaceous deposits, from which can be manufactured practically the whole range of structural clay products; a fact of vital importance to a region almost entirely devoid of native timber and building stone."

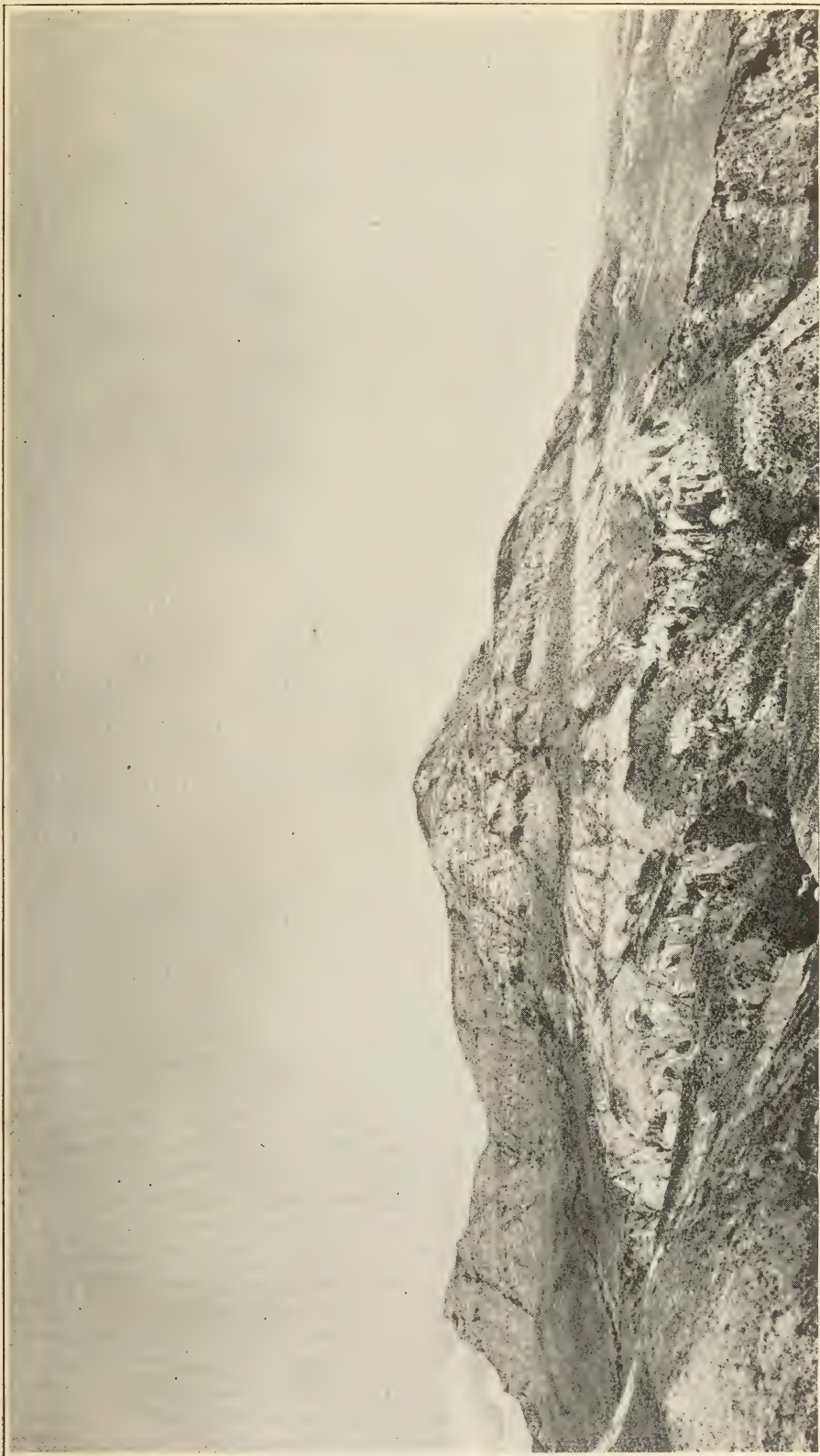
The recovery or mining of these clays is rendered especially simple by the topographical features of the country. The exposures of clays in deep coulee sides make them easy of access. They are nearly all workable by the open pit method. Even the high grade refractory clays are so well exposed that underground mining will not be necessary for some time to come.

The clayworking industry of the province at present only includes brick-making and hollow building blocks. The principal brick-yards are situated at Estevan, Shand, Claybank, Broadview, and Saskatoon, while fireproofing or hollow blocks as well as brick and drain tile are made at Bruno.

The plant at Claybank manufactures fire brick as well as a fine range of dry-pressed face brick and mantel brick. These goods are equal in colour and quality to any brick hitherto imported. Clay is mined at two localities, East End and Willows, and shipped to Medicine Hat, where it is used in the manufacture of sewer pipe and stoneware pottery.

There is a great demand for hollow clay building blocks, as these are easily and quickly laid, but the plant of the Bruno Clay Works is the only place in the Province where they are made at present.

The importance of the clays in Saskatchewan, particularly in the southern portion, is due to the fact that there are many beds of material



Panoramic view of Eagle Buttes in the Frenchman river valley, near Ravenscrag, Sask., showing whitemud beds at the base of the section.

of higher grade than the usual glacial surface clays which are so widespread in Canada and which are capable only of making common brick.

The white clays in Saskatchewan are suitable for the manufacture of stoneware, Rockinghamware, and white earthenware. Some of these clays when washed appear to be ball clays, and as such could be used in the manufacture of tableware like semi-poreelain. This is the only district in which anything approaching ball clay has been found in Canada. The English ball clays are those mostly used for tableware. Various beds of the white clays can be used alone for the manufacture of pottery, such as teapots, bowls, crocks and jars, or for art pottery of various kinds.

For the finer grades of ware the clay should be washed and screened and mixed with 30 to 50 per cent of powdered quartz and feldspar. This mixture would be suitable for the class of ware known as Doulton, which is made in England.

The attention of teachers in technical schools and in the manual arts department in public schools should be directed to the possibilities of the Saskatchewan clays for modelling purposes in instruction in the plastic arts. Some of the clay beds near East End are pointed out as particularly useful for this purpose.

It is possible that architectural terra cotta, a material now coming largely into use for facing office buildings, can be manufactured from these clays. This material is not being made in Canada at present, but it is imported in large quantities from the United States and even from England. The terra cotta for St. James Church, Saskatoon, was made in England.

In the rougher grades of clay products there are openings for the manufacture of fire-brick, stove linings, sewer pipe and electric conduits, paving brick, face brick, and all varieties of burned clay products for structural uses, so that the future of the clay-working industry of the province is very promising.

Fuels for firing the kilns have proved an expensive item in the clay industry. To date the supply has been chiefly drawn from the semi-bituminous fields of Alberta, and the long freight haul has resulted in heavy costs. In the Estevan district a certain amount of local lignite is utilized, but its full efficiency is not being utilized. Wood is entirely out of the question. A solution of the difficulty appears imminent in the introduction of gas-burning kilns. Recent developments in firing intermittent kilns with gas indicate that it is a great saving in fuel and kiln expenses. Drilling for natural gas is being carried on in different parts of the province, and it is hoped a supply may be found to meet the demands of the clay-working industry. In the meantime, or should these hopes prove abortive, the use of gas produced from local lignite is likely to become general. Extensive tests carried on at the Fuel Testing plant of the Mines Branch at Ottawa have shown that the lignites are ideal for making producer gas for power generation in a gas engine. The gas producer is an economical means of converting a poor fuel to a high-grade one and will prove a boon to the clay-working industries of the province. In this connection, the working of the clays and lignites together may be made practicable when the development of either alone might prove a failure.

The low temperature used in burning common brick may be secured by the use of lignite fuel fired direct. When higher temperatures are used,

such as in burning sewer pipe or face brick, and the cost of installing a producer gas apparatus is too expensive, then forced draft should be used. A fan and a system of underground flues are required to send the air under pressure to the fire boxes of each kiln. The use of forced draft enables the time of firing to be reduced, saves fuel and labour, gives high kiln efficiency, and is independent of weather conditions.

Lack of transportation, in the early stage of the industry, was a serious drawback to its advancement. Not only was it difficult to get fuel to the clay deposits, but it was also as serious a matter to get the finished product to the market. The energies of the railway corporations were directed toward the completion of trunk lines, the inbringing of settlers, and the hauling of crops. With trunk lines now completed in plenty, and even double tracked, the matter of building branch lines and feeders becomes of first importance. With the denser settling of the province and the tilling of more land, the need of local lines becomes apparent. These will serve the clay-working industry and open up areas that otherwise would be valueless. The Weyburn-Stirling branch of the Canadian Pacific Railway has recently opened up valuable clay belts to the south end of Lake-of-the-Rivers and of Frenchman River valley. The Avonlea-Gravelburg branch of the Canadian National railway has tapped the northern end of the Lake-of-the-Rivers clay belt and the high-grade clays of Claybank district. Another branch south of the Canadian Pacific, if completed along the proposed route, will open up the clay and lignite areas in the Wood Mountain district.

From the standpoint of the railways themselves, feeders from such districts should prove most valuable, offering a steady flow of freight the year round. The products of the farms are offered almost en masse, causing an annual congestion in the fall, but the clay products flow more evenly.

Without markets within easy reach and offering an unfailing outlet and profitable returns, the industry could not thrive. During the boom days of the West the demand was far in excess of the supply, and prices were a secondary consideration. Nearly all building material had to be imported from Eastern Canada, British Columbia, or the United States, and rich harvests were reaped by firms supplying such wants. Prospects for making speedy profits led to the establishment of numerous brick-making plants throughout the province. Many of these were hurriedly put into commission, without proper forethought or intelligent arrangement, and cannot expect to operate on a successful economic basis until scientific methods of operations are introduced. Others were too late for the boom. The general depression following the outbreak of war and the rigid economy exercised along other lines utilizing clay products naturally lessened the activities of the industry. Now that the war is over, and a large influx of new settlers is likely to arrive, business may be expected to resume normal conditions. The country is essentially a farming one, which guarantees its permanency. Its prairie nature makes the farm, as well as the city, an outlet for clay products. The danger from prairie fires, the scarcity of lumber, and the prosperity of the agricultural classes all tend to increase the demand for brick and other burned clay products in the erection of rural buildings.

Other Minerals

Aside from clays and coals, all other mineral indications in Saskatchewan can be classed only as prospects or possibilities at the present time, though the outlook of some may be promising. Lack of systematic prospecting and real development have prevented any accurate knowledge of the value and extent of many reported discoveries being obtained. It may be pointed out, however, that even prospecting is in its infancy, and no serious attempt has yet been made to determine the mineral resources of the province. Forecasts would be premature at this time, but certain indications suggest the reasonableness of hoping for encouraging results upon further investigations and would justify a more intensive activity in that direction. A few of these indications or discoveries are briefly reviewed herein, but enlargement upon them is unnecessary.

Gold has been discovered in quartz veins on Amisk lake in what appears to be paying proportions. This district adjoins the Manitoba boundary and the sulphide and gold fields of that province. During the rush of 1912 some 1,500 claims were staked about this lake, but development work of any extent has not been attempted on more than half a dozen of such claims. In 1908 a stampede took place to Lac la Ronge, where finds of gold-bearing quartz and copper sulphides were reported. No development has followed, though deposits of copper ore are believed to exist there. The presence of iron has been established, though the amounts are uncertain. Silver has been reported at Fond du Lac, at the easterly end of lake Athabaska. A number of claims have been staked, but very little work has been done.

The great flow of natural gas obtained at Medicine Hat, a few miles west of the Saskatchewan-Alberta boundary, and the oil developments in other parts of Alberta have roused hopes of similar possibilities in Saskatchewan. The oil and gas boom of 1914 resulted in much speculation, but little work. Drilling in many parts of the province, however, is now being quietly carried on with varying success.

Mineral pigments and mineral waters have been noticed in some localities. The making of peat presents a possible industry. Gypsum crystals have been found sparingly in shale deposits. Salt springs occur in various places. The alkali lakes that are scattered through the province have an abundance of soda salts and occasionally magnesium salts.

Lime can be obtained in plenty from drift boulders. Sand and gravel for building and road-making purposes are widely distributed. Silurian limestone formations occur about Cumberland lake and drift, probably from this source, is found in the Prince Albert-Saskatoon district. The Provincial University buildings at Saskatoon are built from this drift. Quartz and granites are found in the Pre-Cambrian formations outcropping throughout the Churchill basin. Drift boulders from these sources are found in many parts of the province and are utilized as building and road-making material.

The oil shales of the Pasquia Hills present interesting possibilities, not only in the distillation of oils, but in the production of ammonium sulphate as a by-product to be used as fertilizer. The vast wheat lands of the province will shortly demand the keeping up of the value of their soils by fertilizers and this is a possible source of supply.

FURS, FISH AND GAME

The original grant to the Hudson's Bay Company in 1670 included practically all the territory now embraced within the Province of Saskatchewan. For nearly one hundred years (1670-1763) the fur trade was carried on by the Hudson's Bay Company and by individual French traders from Quebec. For a period of 58 years after the cession of Canada in 1763 the fur trade was in the hands of two great rivals, the Hudson's Bay Company and the Northwest Company. These two companies were amalgamated in 1821. For nearly two centuries the traders and explorers of the vast western regions of North America were extending their discoveries and a long list of famous names and accounts of their wanderings have passed into history. In 1870, some 200 years after receiving their monopoly to Prince Rupert's Land, the Hudson's Bay Company surrendered it for certain considerations to the Government of Canada, and since that date the company has carried on the fur trade as an ordinary commercial concern. A statement of their affairs in 1872 puts their total number of posts at one hundred and forty-four, of which about twenty were located in the area now included in the province of Saskatchewan. In the list are included such interesting names as Fort Pelly, Fort Ellice, Qu'Appelle Lakes (Fort Qu'Appelle), Touchwood Hills, Cumberland House, Fort à la Corne, Pelican Lake (Pelican Narrows), Fort Pitt (now in ruins), Battleford, Carlton House, Prince Albert, Ile à la Crosse, Portage la Loche, Green Lake, Fond du Lac and others. Some of the posts mentioned in the earliest records are not included in the list, probably having been abandoned or destroyed previous to this date. One of these is Chesterfield House, located at the junction of the South Saskatchewan and Red Deer rivers. Their posts still extend over the wilds of northern Saskatchewan and the trade with the Indians goes on in primitive and peaceful fashion. The principal channels of this commerce are still the old routes so long used. From the Clearwater, by way of Portage la Loche, the lakes and rivers forming the headwaters of the Churchill, Frog portage and the Sturgeon-Weir and Saskatchewan rivers the trappers and traders come and go. From Fort McMurray on the Athabaska to The Pas on the Saskatchewan the old route leads right across the province of Saskatchewan. Both the Hudson's Bay Company and its rival, the Revillon Trading Company, have posts at the historic trading places of Ile à la Crosse, Stanley, Cumberland House and elsewhere.

In the more settled parts of the province the posts of the Hudson's Bay Company have adjusted themselves to their changed surroundings, and the transition has resulted in a range of business houses from the rude log fur post to the modern departmental stores of the capital cities of the West.

It might be supposed that with the settlement of the West the fur-bearing animals would have disappeared. To a certain extent this is true. The most striking and regrettable instance of this is the annihilation of the majestic buffalo which once roamed over the prairies of Saskatchewan in countless thousands. The skins of these monarchs constituted the trade of a small army of Indians and whites, and their flesh fed the entire popu-

lation. With their disappearance went most of the fur trade south of the main Saskatchewan river, but north of this river, embracing more than half the area of the province, is a vast hunting ground well supplied with fur-bearing animals of several species.

The following statement, from the report of the chief game guardian, shows the number and kinds of furs bought in Saskatchewan during the season ending June 30, 1921:

Kinds of furs	Number bought	Estimated value per pelt	Estimated total amount paid trappers
		\$	\$
Mink.....	8,937	9.00	80,433.00
Fisher.....	66	50.00	3,300.00
Marten.....	2,589	25.00	64,725.00
Otter.....	413	20.00	8,260.00
Skunk.....	4,884	2.00	9,768.00
Muskrat.....	267,497	1.25	334,371.00
Beaver.....	8,666	20.00	173,320.00
Silver fox.....	41	250.00	10,250.00
Cross fox.....	289	60.00	17,340.00
Red fox.....	1,131	15.00	16,985.00
White fox.....	46	30.00	1,380.00
Lynx.....	862	25.00	21,550.00
Coyote.....	5,182	8.00	41,456.00
Timber wolf.....	141	10.00	1,410.00
Wolverine.....	77	15.00	1,155.00
Badger.....	265	.75	198.75
Weasel.....	65,316	.60	39,190.00
Bear.....	725	13.00	9,425.00
Rabbit.....	111	.10	11.10
Miscellaneous.....	29	1.00	29.00
Total.....	367,267		834,536.85

The report of the chief game guardian states that there was a marked scarcity of fur-bearing animals during the season 1920-21 and that the catch was only 50 per cent of the normal. The taking of beaver has been prohibited until December 31, 1930.

Fish

The northern part of the province of Saskatchewan offers great possibilities in the matter of fish supply. Its numerous lakes and rivers, many of which are of vast proportions, with their deep, clear, cold waters, make an ideal and extensive region for the exploitation of inland fresh water fisheries. The rugged nature of these northern districts is favourable to such an enterprise. The broken, rocky surface of the ground, with forests of spruce and birch, lend to the numerous lakes and rivers scattered throughout the area a depth and clearness of water not found in the plains. Cool and shaded by summer and sheltered by winter the waters are ideal for fish life. The numerous rapids from lake to lake keep the waters fresh and running. The forests breed insect life for fish food in summer time and give shelter to the fishermen in winter.

The varieties of fish include such valuable species as the trout, whitefish, sturgeon, pickerel and perch. Other species are the tullibee, oatfish, goldeyes, pike and ling. Perhaps the best known fish from these regions is the whitefish, which is shipped out in a frozen condition during

the winter months only. In fact, the fish industry has so far been carried on almost entirely during the winter, the chief exception being sturgeon fishing. The fish are caught in nets placed beneath the ice. Freezing as soon as taken from the water they are packed in wooden boxes and sent in this condition direct to the dealer. Carload lots are regularly shipped to various points in Canada and the United States and find a ready market. The Indians of these northern regions depend almost entirely on fish as a diet during the whole year. Game is obtained when possible but the fish is the Indian's guarantee of a regular meal. As winter travel is chiefly by dog team in the north, great quantities of the coarser varieties of fish are consumed as dog feed, this being their regular subsistence the year round.

The fishing industry of the province is as yet in its infancy. The remoteness of the fishing districts and the lack of transportation facilities have heretofore hindered its development. The chief operations have been conducted up to the present by the great trading companies of the north, but there exists a large field for individual enterprise.

The following table, compiled by the Dominion Bureau of Statistics, in collaboration with the Dominion and Provincial Fisheries Departments, shows the condition of the fishing industry in Saskatchewan during the year 1921:—

QUANTITY AND VALUE OF CHIEF COMMERCIAL FISHES, 1921

Kinds	Quantity	Value
	Cwt.	\$
Whitefish.....	22,987	181,461
Pike.....	3,234	19,529
Trout.....	1,481	14,974
Pickarel.....	1,429	11,732
Mullets.....	1,642	8,632
Goldeyes.....	12	144
Sturgeon.....	44	660
Tullibee.....	232	1,440
Mixed.....	1,723	4,446
Totals.....	32,784	243,018

The total value of equipment, nets, boats, etc., in the province in 1921 was \$43,367.

Fish culture is being conducted by the Dominion Government at various points throughout the West with great success, and fresh stock from these sources is being continually added to the lakes to prevent the depletion of this valuable resource. Most of the hatcheries are located in Manitoba, but there is one in Saskatchewan at Fort Qu'Appelle. It distributes many thousand fry every year in neighbouring lakes.

In the winter fish are hauled by teams and sleighs from Clear and Ile à la Crosse lakes to Big River, the terminus of the Prince Albert-Big River branch of the Canadian National Railway. The distance is about 200 miles by winter trail. Another winter road was opened into Lac la Ronge where a bountiful supply of first-class fish is obtained. The long haul, however, to the end of steel is a serious obstacle to the success of the industry. In severe weather the hardships encountered on the trail and the difficulties of keeping it in good shape are extreme. The time con-

sumed in transporting the fish from the water to the steel, with high wages and excessive prices for provisions and horse feed, add tremendously to the cost of getting the fish to the market. Added to this is the danger of the total loss of the cargo en route should mild weather occur. Freightage at any other season of the year is out of the question owing to lack of any suitable roads and the impossibility of maintaining an adequate refrigerator service on such systems of transportation.

These obstacles have prohibited the exploitation of such tremendous areas as Reindeer, Wollaston, Hatchett, Black and Cree lakes and Lake Athabaska, bodies of water in the far northern regions of the province most lavishly stocked with many varieties of fish of unsurpassed quality and generous size. When one stops to estimate the resources of Reindeer lake, a body of water 150 miles long by 50 miles wide, teeming with fish of this nature, some idea will be gained of the great values of wholesome food at the disposal of this province.

The winning of these resources nevertheless will not be without its problem, but the difficulties of their economic recovery should not be insurmountable. Railway extension, to a certain extent, is feasible, and this will partially solve the problem. But other schemes will bear investigation. Water-power is everywhere available, and it might be utilized in connection with local industries, such as the canning, drying, smoking or other methods of curing and preserving these products at the lakeside. This would give an all the year round industry and permit of the finished products being transported at the most convenient times and in the most economical manner. The many phases of the situation admit of much diversity of opinion regarding the most feasible means of creating an extensive and permanent industry, but the ultimate success of the industry is not doubted.

The fisheries of the province are a federal resource, and are administered by the Fisheries Branch, Department of Marine and Fisheries, Ottawa. For purposes of control and administration two districts have been created, Northern and Southern Saskatchewan, each in charge of a local inspector under the direction of the chief inspector, whose headquarters are at Indian Head. Commercial fishing is regulated to certain set seasons, and subject to certain conditions, and can only be proceeded with under license, which must be obtained from the officers of the Fisheries Branch. In the enforcement of the regulations the inspectors are assisted by the provincial police and other officials.

Game

The provincial authorities, as represented by the Chief Game Guardian and his staff of assistants, are making great efforts to establish among sportsmen sane, scientific principles of conservation of wild life. Only by such means and the faithful application of these principles can the game of Saskatchewan be preserved for future generations. Lectures are given at public meetings and to school children, literature is distributed, and, through the medium of the press, every effort is made to instruct the public on the necessity for conservation of wild life.

The southern part of the province, being purely a farming and agricultural district, cannot expect to preserve the same amount of game,

particularly the larger animals and fur-bearing species, as the more solitary and rugged northern parts. Yet the graceful antelope, in the sparsely settled and hilly ranching districts near the border, should be permitted to thrive. It is protected by law the year round and hopes are entertained for its increase. That favourite game bird, the prairie chicken (pinnated grouse), is also in danger of extermination. The prairies would not seem complete without it. The Provincial Government has wisely protected this bird during the entire year. South of township 35 good shooting may be had during the open season (September 15 to December 31) of ducks, geese, rails, coots, black-breasted and golden plover, Wilson or Jacksnipe and greater and lesser yellowlegs. Many species of fur-bearing animals also are found. North of township 35 game birds, fur-bearing animals and big game animals (moose, elk, caribou and deer) are plentiful except the elk, and this animal has been absolutely protected since 1919.

During the open season of 1921 moose were unusually scarce, but at the close of the season they returned south in former abundance. The elk are again becoming plentiful under protection in the northern part of the province while in the southern portion the deer are fairly common. Caribou hunting is confined to the regions northeast of Prince Albert and in the Hudson Bay Junction district, which are difficult of access. The antelope, or prong-horn, which was abundant a year ago in southern Saskatchewan, has dwindled almost to extermination. Its fate depends upon the hearty co-operation between the Government and settlers in an endeavour to preserve this beautiful animal. The following statement, prepared by the Chief Game Guardian, shows the number and kind of big game animals killed between 1915 and 1921:—

Kind	1915	1916	1917	1918	1919	1920	1921
Moose.....	860	1,030	1,215	456	1,101	1,220	409
Elk.....	210	175	152	90			
Deer.....	475	460	375	320	661	900	487
Caribou.....	5	35	64	34	64	80	31
Totals.....	1,550	1,700	1,806	900	1,826	2,200	927

As the caribou keep well to the distant parts of the province, few are brought out as trophies of the hunt. In northern parts the Indians and trappers kill great numbers; in fact, the destruction becomes most wanton and criminal at certain seasons. During the winter of 1917-18, it has been stated on good authority, the Indians of Reindeer lake killed an average of 200 each, and a total of 50,000 for the tribe. Much of this meat and nearly all the hides were left to decompose. Too ignorant to realize that they are hastening the day of their own starvation, these tribes should be taught the necessity of conserving the big game.

Wolves also play havoc with the game, and coyotes imitate their example in respect to smaller fur-bearing animals, game birds, and domestic animals and poultry. In the amended Wolf Bounty Act of 1919 the statutory bounty is fixed at \$10 for gray or timber wolves, and \$1 for coyote and timber wolf pups. The Department of Agriculture refunds to every municipality 50 per cent of the statutory bounty paid for every timber wolf or coyote pup killed. During the five-year period ending April 30, 1921, the sum of \$168,416.50 was expended in bounties for the

destruction of these animals. More drastic action is required to protect the northern parts of the province from the ravages of the wolves. The game laws now prohibit the killing of female deer and fawns, but the Indians of the north kill everything on sight at any time of the year. Stricter enforcement of the laws in these parts will be to their ultimate advantage. The hunting ground of the north is an area the province may well be proud of, and it is worthy of every care and protection.

Wise legislation has been enacted in the establishment of several provincial game preserves—large areas of land set aside for the purpose of propagating and perpetuating beneficial birds and animals. Each preserve is in charge of a game guardian, whose duty it is to see that the laws are enforced forbidding the hunting, shooting, trapping, or molestation of these birds and animals and to protect their haunts as far as possible, from the ravages of animals or birds of prey, fires, vermin, or other agencies which would be detrimental to the success of the undertaking. A number of private preserves are also being conducted under license and are meeting with considerable success. They include four for the raising of foxes, one for deer, and five for wild geese. A start has thus been made in the fur-farming industry. Reports from the game guardians in charge of these various preserves indicate that very satisfactory results are being obtained. Not only are the game and fur-bearing animals and game birds increasing, but many species of beautiful song birds, as well as valuable insectivorous birds, are finding in these preserves safe retreats for the rearing of their young. The following table contains a list of these provincial game preserves:—

LIST OF SASKATCHEWAN GAME PRESERVES*

	Sq. miles
Moose Mountain Game Preserve.....	150
Cypress Hills Game Preserve.....	75
Beaver Hills Game Preserve.....	100
The Pines Game Preserve.....	160
Duck Mountain Game Preserve.....	80
Porcupine Game Preserve.....	700
Pasquia Game Preserve.....	1,800
Fort-a-la-Corne Game Preserve.....	400
Big River Game Preserve.....	360
Total.....	3,825

Also the following preserves of irregular dimension, including principally water areas:—

Wascana Game Preserve.....	On Wascana lake and river
The Isle of Bays Game Preserve.....	In Lake Johnston
North and South Saskatchewan Rivers Game Preserve,	
Last Mountain Lake.....	Breeding grounds for wild fowl, about 2,500 acres.

The wild animals and birds of the province constitute part of its own resources, and legislation governing their protection or disposal is embodied in The Game Act of Saskatchewan. The only exception are such species of migratory birds as fall within the classes affected by the Treaty for the Protection of Migratory Birds. The enforcement of the provisions of The Game Act is carried out by the Saskatchewan Provincial Police, a staff of

*Chief Game Guardian, Regina, Saskatchewan.

Provincial Game Guardians, and a large number of voluntary game guardians, now over three hundred, co-operating in this work. All members in good standing of any game protection association in Saskatchewan, issuers of game licenses, and city, town, and village constables are ex-officio game guardians under the provisions of The Game Act.

Permit or license must be obtained from proper officials for the hunting, shooting, or trapping of game, birds or animals, and for the transportation or exportation of their meat, hides, or heads. Trappers and fur traders are also required to hold licenses. Before taking any action in connection with these sports or pursuits, parties should acquaint themselves thoroughly with the terms of The Game Act.

The administration of this Act is undertaken by the Department of Agriculture under the direct control of a Chief Game Guardian. In this connection the department has made provision for a Provincial Museum, of which the Chief Game Guardian is curator. Good progress has been made in gathering together a collection of representative birds and animals of the province. These have been mounted and placed on exhibition in the museum, together with a varied collection of articles of historic or other interest. The wild life of the province is exceedingly interesting and prolific and forms a valuable resource. The museum will fill an important place in spreading knowledge regarding the many species comprising such life and in moulding a proper viewpoint regarding its taking or protection.

APPENDIX

*SYNOPSIS OF DOMINION LAND REGULATIONS

What Land Available

All surveyed agricultural Dominion Lands in Saskatchewan, which are not disposed of and not reserved or occupied, are open to homestead entry. Islands are reserved from entry.

An entry does not include the mineral or water rights.

The sole head of a family, or any male over eighteen years old, may homestead one quarter-section of available Dominion land in Saskatchewan. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any Dominion Land's Agency (but not sub-agency), on certain conditions.

NOTE.—No application for an entry for a homestead shall be granted unless the person making the application was at the commencement of the war, and has since continued to be a British subject or a subject of a country which is an ally of His Majesty, or a subject of a neutral country, and unless he establishes the same to the satisfaction of the Minister of the Interior. This does not apply to members of the Canadian Expeditionary Forces naturalized since the war begun.

An agent may reserve one available quarter-section as a homestead for a minor over seventeen years of age until he is eighteen, on certain conditions.

Application for homestead entry may be made by a person eligible under the provisions of "The Dominion Lands Act," either at the Land Agency for the district in which the land is situated, or at the office of a sub-agent authorized to transact business in the district.

Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least eighty acres, on certain conditions. A habitable house is required except where residence is performed in the vicinity.

The area of cultivation is subject to reduction in case of rough, scrubby or stony land. Live stock may be substituted for cultivation under certain conditions.

A homesteader is allowed six months from the date of his entry within which to perfect the same by taking possession of the land and beginning his residence duties. Any entry not so perfected within that period is liable to cancellation.

SYNOPSIS OF MINING REGULATIONS

Full information regarding mining regulations may be obtained from the Mining Lands and Yukon Branch, Department of the Interior, Ottawa.

Leases upon specified conditions and terms may be had for coal mining rights, petroleum and natural gas rights, and for building stone, clay and other construction products.

*Dominion Lands Branch, Department of the Interior, Ottawa.

Claims may be staked where minerals have been discovered and leases obtained for the same after completion of certain requirements. The regulations regarding staking of claims, method of recording, fees, etc., may be had upon application.

SYNOPSIS OF TIMBER REGULATIONS

Timber may be cut upon vacant Dominion lands in the province of Saskatchewan either under license or under permit.

Berths under license of 25 square miles are disposed of at public auction. Annual ground rent of \$10 per square mile is required and timber of less than ten inches at the stump may not be cut.

Permits may be issued to owners of portable saw mills to cut lumber, singles and lath on berths not exceeding one square mile in districts where the settlers cannot secure lumber.

Under certain conditions permits may be granted to cut timber as cordwood, pulpwood, fence posts, etc., and permits are granted to actual settlers having no timber of their own to cut certain quantities for their own use.

Information may be obtained from the Timber and Grazing Branch, Department of the Interior, Ottawa.

SYNOPSIS OF GRAZING REGULATIONS

Grazing leases of vacant Dominion lands unfit for agricultural purposes may be issued to British subjects for a period of ten years. Lands so leased are not open to settlement. Lots of not more than 12,000 acres may be leased, and fencing is required.

Community grazing tracts, comprising three sections or more, may be leased by the Provincial Government. Yearly grazing permits are issued on school lands.

The Timber and Grazing Branch, and School Lands Division, Department of the Interior, Ottawa, will supply information in detail.

SYNOPSIS OF THE SASKATCHEWAN GAME LAWS

The Game Act and the Useful Birds Act

Protected at all Times—

1. Buffalo and antelope.
2. Female deer and the fawns of any deer.
3. Deer, caribou, moose and elk south of Township 35.
4. Prairie chicken (sharp-tailed grouse and pinnated grouse), ruffed grouse or partridge, Canada or spruce grouse, sage grouse, cranes, swans, pelicans, loons, bitterns, gulls, terns, and insectivorous birds.

5. All animals and birds within the Provincial Game Preserves.

Unlawful—

1. Shooting or hunting on Sunday.
2. Shooting or hunting between one hour after sunset and one hour before sunrise.
3. Use of poison, nets, automatic guns, night lights, etc.
4. Allowing dogs at large in haunts of deer.
5. Shooting or hunting on any person's land without permission from the owner.
6. Shooting or hunting without a license (except resident farmers in the case of game birds only).
7. Carrying loaded firearms in any vehicle.
8. Offering game of any kind for sale.
9. Offering or accepting for transportation any shipment of the flesh of big game animals between January 1 and November 16 in any year.

Licenses.—Before commencing shooting, hunting, trapping or fur trading a license must be obtained. The fees vary according to the nature of the license and the place of residence of the applicant. The storage, sale and export of meat, furs, heads, etc., is also regulated. Application for fuller particulars should be made to F. Bradshaw, Chief Game Guardian, Regina, Saskatchewan.

PRAIRIE AND FOREST FIRES

Extracts from "The Prairie and Forest Fires Act"—Saskatchewan.

3. Any person who directly or indirectly, personally or through a servant, employee or agent,—
 - (a) kindles a fire and lets it run at large in any woods, on prairie, meadow, marsh or other open ground not his own property; or
 - (b) kindles and leaves a fire burning, without taking effectual means to prevent its spreading in any woods, or on prairie, meadow, marsh or other open ground not his own property; or
 - (c) intentionally or by carelessness permits fire to pass from his own land to the injury of the property of another person; shall be guilty of an offence and liable on summary conviction to the penalties mentioned in this Act.
4. (1) Any person may kindle a fire in a wood or in prairie, meadow, marsh or other open ground, for cooking, warmth, branding or other industrial purpose, on the following conditions. He shall:
 - (a) select a place in a neighbourhood where there is the smallest quantity of combustible material or the least likelihood of fire spreading;
 - (b) clear the space in which the fire is to be lit by removing all vegetable matter, dead trees, branches, brushwood and dried leaves from the soil within a radius of ten feet from the fire.
- (2) He shall also exercise and observe every reasonable care and precaution to prevent such fire from spreading and shall before leaving carefully extinguish it.

5. (1) No person shall, directly or indirectly, personally or by a servant, agent or employee, kindle a fire for the purpose of guarding property, burning crops or stubble or clearing land, unless the land on which the fire is started is at the time completely surrounded by a fireguard not less than twenty feet in width consisting of land covered with snow or water or so worn, graded, ploughed or burned over as to be free from inflammable matter.

(2) Any person kindling a fire for any of such purposes shall, during the whole period of its continuance, cause it to be guarded by three adult persons provided with proper appliances for extinguishing prairie fire.

6. The penalties imposed by this part shall not apply to any person who, in order to save life or property from a running fire in open prairie, kindles a fire and lets it run.

7. Any person who, by himself, his servants or agents or anyone acting by or under his authority, in the process of opening up a road allowance, private road or trail, obtaining fuel, clearing the right of way for a railway, telephone or telegraph line or route or clearing land for any purpose whatever, cuts any timber bush or brush, shall cause the fallen timber, timber slashings and refuse to be collected into piles suitable for burning on such right of way, road allowance, private road, trail or clearing, and shall burn the same at the time of cutting, provided that,—

- (a) the circumstances and surrounding conditions are such that there will be no probable danger from spread of the fire; or
- (b) a sufficient number of men are present to prevent it from spreading; otherwise such fallen timber, timber slashings and refuse shall be burned between the fifteenth day of November following the date of cutting and the first day of April the next ensuing.

8. Any person, who, by himself, his servants or agents or anyone acting by or under his authority, sets fire to timber standing in the soil, or to fallen timber, timber slashings or refuse in such manner and under such circumstances and conditions as render it dangerous or probable that the fire will spread and cause the destruction of wood, timber or property not his own, shall be guilty of an offence and liable upon summary conviction to a penalty of not less than \$50 nor more than \$200, and in default of payment thereof to imprisonment for any term not exceeding twelve months.

9. (1) No person shall, without the written permission of a fire guardian, set fire to or burn any trees, brush or shrubs while standing in the soil, or any fallen timber, timber slashings, wood, branches, brushwood, plants, black loam or light soil, between the first day of April and the fifteenth day of November next ensuing, within,—

- (a) any area north of township fifty, excepting township fifty-one in ranges sixteen to twenty-eight inclusive, townships fifty-two and fifty-three in ranges twenty to twenty-eight inclusive, all west of the third meridian; or
- (b) the wooded area comprised of township forty-six in ranges seven to nine inclusive, townships forty-seven and forty-eight in ranges seven to eleven inclusive, townships forty-nine and fifty in ranges seven to thirteen inclusive, all west of the third meridian; or

(c) six miles of any Dominion Forest Reserve.

39. (1) Any person who in or upon any prairie, meadow, marsh or forest throws away or drops any burning match, ashes of a pipe, lighted cigar or cigarette, or any other burning substance, or who discharges any firearms, shall completely extinguish, before leaving the spot, the fire of such match, ashes of a pipe, cigar, cigarette, wadding of the firearm or any other burning substance.

CUSTOMS AND FREIGHT REGULATIONS

Intending settlers should obtain from the Department of Immigration and Colonization, Ottawa, and from the steamship and transportation Companies the latest regulations regarding customs and freight charges.

A settler may bring into Canada, free of duty, a specified number of live stock which have been owned by him abroad for at least six months before his arrival in Canada. Duty is to be paid on live stock in excess of the specified number. Certain articles for use have free entry, such as wearing apparel, household furniture, tools, vehicles, tractors, agricultural implements, etc., if used by the settler for at least six months before his arrival.

Freight regulations specify that farm settlers' effects by carload shipments must consist of household goods and personal effect, live stock not exceeding a total of ten head, lumber and shingles not exceeding 2,500 feet in all, or a portable house, seed grain, trees or shrubbery, poultry and feed. Additional animals will be charged for at special rates. One man will be passed free in charge of full carloads of settlers' effects.

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ERRATUM, PAGE 29

Since page 29 of this report was printed a change has been made in the Dominion Land Districts mentioned there. The Dominion Land Agencies at Swift Current, Saskatoon and Battleford have been cancelled, all the business being handled by the agencies at Moose Jaw, Prince Albert and Edmonton.

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